

**OUR 2025 VISION:
*OUR SUSTAINABLE FUTURE***

2020-2025

**Sustainable Development Management Plan
(SDMP)**

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Forward

The 2020-2025 Sustainable Development Management Plan 'Our 2025 Vision: Our Sustainable Future' is unique in that it provides a 5-year strategic approach, whilst simultaneously setting out detailed plans and actions, both required to deliver excellence in sustainability performance.

This approach has been taken for reasons including the expectation by NHS England and NHS Improvement that all NHS providers should produce and deliver a Board approved SDMP that is valid for 3 to 5 years. In addition, the NHS standard contract mandates that SDMPs set out detailed plans and actions. Reaching beyond the minimum of what is expected; inherent in this SDMP is recognition of the value of sustainability. Sustainability underpins quality services and systems, which give rise to health, wellbeing, quality of life, and quality of care experienced by all users of the Trust.

The NHS Long Term Plan refers to the NHS as an 'anchor institution', which contributes to the local economy, society and environment. At UHNM we believe that delivering this ambitious Sustainable Development Management Plan is a measure of a well led, responsible organisation.

The SDMP achieves this by outlining a vision and three priorities to aim for by 2025:

2025 Vision:

The Trust is committed to delivering a world-class sustainable healthcare system that works within the available environmental, financial and social resources; protecting and improving health now and for future generations

**Priority 1:
Reduce Environmental Impact**

**Priority 2:
Build Healthy, Sustainable and Resilient Services and Communities**

**Priority 3:
Embed Prevention and Sustainable Clinical and Care Models**

Looking towards the national picture, the UK government has recently committed to reducing all greenhouse gas emissions to net zero by 2050, thereby accelerating the Climate Change Act (2008) target which previously specified an 80% reduction by 2050.

This highlights the UK's aggressive transition toward sustainable development and it is imperative that the public sector support this.

According to the Lancet, climate change is 'the biggest global public health challenge of the 21st century' and as such, UHNM is committed to demonstrating exemplar leadership in sustainability and providing unwavering support to this global agenda throughout the Trusts daily services and operations.

1. Introduction

1.1 Scope

This 2020-2025 Sustainable Development Management Plan (SDMP) ‘*Our 2025 Vision: Our Sustainable Future*’ is a refresh of the previous 2015-2020 SDMP.

This SDMP is unique in that it provides a 5-year strategic approach, whilst simultaneously setting out detailed plans and actions, both required to deliver sustainability performance. Other documents should also be read in conjunction, in order to give further operational detail on specific areas, for example the Waste Management and Handling Policy and Energy Policy and Strategy.

A sustainability statement is included in Policy GO1 (The Development and Control of Trust Policies and Guidance Package). As such, sustainability is incorporated in all Trust policy documents in order to ensure that employees are aware of the sustainability agenda and the implications of individual actions and decisions.

1.2 Drivers for Change

There are drivers that are compelling UHNM to transition into a sustainable, low carbon Trust which increases its influence on the wider community.

a. LEGISLATIVE

The delivery of the SDMP will also ensure that UHNM will achieve its statutory and policy commitments (as outlined in Appendix B). At the forefront, these include:

Climate Change Act (2019)

To protect the wellbeing of the UK population the NHS, public health and social care system has aligned to the UK Climate Change Act. The Act (2008) was introduced to ensure the UK cuts its carbon emissions by 80% by 2050 (against a 1990 baseline) and to ensure that the Government’s programme for adaptation enables the UK to prepare for the impacts of climate change. In 2019, based on recommendations from parliament’s Committee on Climate Change, the UK government accelerated this target by committing to reduce all greenhouse gas emissions to net zero by 2050.

Civil Contingencies Act (2004)

The Civil Contingencies Act 2004 recognises that our changing climate is a major driver of many of the emergencies and extreme events that the UK must be better-prepared for. Heat waves, flooding and cold weather can disrupt the operation of the health and care system and have direct impacts on health. As such, the Act requires that organisations ensure better preparedness for adverse events.

Public Services (Social Values) Act (2012)

The Public Services (Social Value) Act 2012, places a requirement on commissioners to consider economic, social and environmental benefits, taking a value for money approach - not lowest cost - to assessing contracts, when buying goods and services.

b. MANDATORY WITHIN THE NHS

NHS Standard Contract (Service Condition 18: Sustainable Development)

The NHS Standard Contract issued by commissioners requires that Providers:

- Maintain and deliver an SDMP and provide an annual summary on progress;
- Quantify environmental impacts and publish in its Annual Report quantitative progress data (emissions reduction)
- Give due regard to the impact of expenditure on the community, over and above the direct purchase of goods and services, as envisaged by the Public Services (Social Value) Act 2012.

SDMPS must set out detailed plans and actions in pursuit of NHS Long Term Plan commitments on:

- Reducing air pollution – including by transitioning its fleet to low and ultra-low emission vehicles; by implementing expenses policies for staff which promote sustainable travel choices; and by ensuring that any car leasing schemes restrict the availability of high-emission vehicles;
- Reducing carbon emissions – by reducing emissions from premises, by (as clinically appropriate) reducing the use of environmentally-damaging anaesthetic agents such as desflurane; and by reducing carbon impacts from the prescription and disposal of propellant asthma inhalers;
- Adaptation - adapting premises and the way in which services are delivered to mitigate risks associated with climate change and severe weather;
- Reducing the use of single-use plastic products - observing the NHS Plastics Pledge to eliminate avoidable single-use plastics in NHS catering facilities.

NHS Operational Planning and Contracting Guidance (2020/21)

The NHS Operational Planning and Contracting Guidance states that deliverables for sustainable development should include:

- Cut business mileages and NHS fleet air pollutant emissions by 20% by 2023/24. In 2020/21 organisations should:
 - Consider signing up for a free Green Fleet Review;
 - Reduce air pollution from fleet vehicles, by ensuring all fleet vehicles purchased or leased by the organisation after 1 April 2020 support the transition to low and ultra-low emission (ULEV) in line with Long Term Plan Commitments. Using the Sustainable Development Unit's Health Outcomes of Travel Tool (HOTT) can help organisations to measure the impact their travel and transport has in environmental, financial and health terms;
 - Ensure that any car leasing schemes restrict the availability of high-emission vehicles;
 - End business travel reimbursement for any domestic flights
- All NHS organisations should move to purchasing 100% renewable electricity from their energy suppliers by April 2021;
- Providers should replace lighting with LED alternatives during routine maintenance activities;
- All NHS organisations must ensure all new builds and refurbishment projects are delivered to net zero carbon standards;
- All organisations are expected to implement the Estates and Facilities Management Stretch programme which will be published by NHS England and NHS Improvement in 2020. This will set out key activity's organisations can take to reduce the environmental impact of their estates;
- Reduce the use of single use plastics in the NHS, beginning by signing up to and delivering the NHS Plastics Pledge which commits organisations to phase out avoidable single-use plastic items;

- Reduce the carbon impact of Metered Dose Inhalers in line with long term plan commitments, including by:
 - Decreasing the percentage of inhaler prescriptions that are for Metered Dose Inhalers where clinically appropriate;
 - Reducing the overall carbon impact of all inhalers dispensed at pharmacy;
 - Encouraging patients to return spent devices for green disposal in pharmacy medicines waste.
- Reduce the carbon footprint associated with anaesthetic gases in line with long term plan commitments by:
 - appropriately reducing the proportion of desflurane to sevoflurane used in surgery to less than 20% by volume;
 - Local systems and providers assessing the potential to reduce unnecessary emissions of nitrous oxide to atmosphere.

c. INTERNATIONAL GUIDANCE

United Nations (UN) Sustainable Development Goals

The Sustainable Development Goals (SDGs) were adopted by all United Nations Member States in 2015 in order to achieve the following by 2030:

- GOAL 1: No Poverty
- GOAL 2: Zero Hunger
- GOAL 3: Good Health and Well-being
- GOAL 4: Quality Education.
- GOAL 5: Gender Equality
- GOAL 6: Clean Water and Sanitation
- GOAL 7: Affordable and Clean Energy
- GOAL 8: Decent Work and Economic Growth
- GOAL 9: Industry, Innovation and Infrastructure
- GOAL 10: Reduced Inequality
- GOAL 11: Sustainable Cities and Communities
- GOAL 12: Responsible Consumption and Production
- GOAL 13: Climate Action
- GOAL 14: Life Below Water
- GOAL 15: Life on Land
- GOAL 16: Peace and Justice Strong Institutions
- GOAL 17: Partnerships to achieve the Goal



The core principle of the SDGs is a call for action by all countries, in a global partnership. The 17 SDGs are all interrelated and action in one area will affect other outcomes for example, ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality and encourage economic growth.

There is a linkage between the Sustainable Development Unit (SDU) Sustainable Development Assessment Tool (SDAT) and the SDGs. The SDAT measures annual sustainable development progress and in doing so, facilitates an understanding of how to support progress against the SDGs. As such, this SDMP includes reference to the SDGs and their applicability to the Trust, as a healthcare organisation.

d. UK GUIDANCE

The Stern Review

The Stern Review: *The Economics of Climate Change* (2006) concluded that the benefits of strong, early and coordinated mitigation action against Climate Change far outweigh the economic costs of doing nothing. Mitigation must be viewed as an investment, a cost incurred now and in the coming few decades to avoid the risks of very severe consequences in the future.

e. HEALTH SPECIFIC GUIDANCE

The NHS Long Term Plan

In January 2019, the NHS published its Long Term Plan. This 10-year plan refers to the NHS as an 'anchor institution', which contributes to the local economy, society and environment. Building on this theme, the plan includes the following commitments towards sustainability:

- Adhering to the UK government Climate Change Act (2008), reducing carbon emissions (on a 1990 baseline) by 51% by 2025 (N.B. *UK government has now accelerated this target through a commitment to reduce all greenhouse gas emissions to net zero by 2050*);
- Reducing single-use plastics;
- A shift to lower carbon inhalers will deliver a reduction of 4%, with a further 2% delivered through transforming anaesthetic practices;
- Improving air quality by cutting business mileage by 20% by 2023/24; ensuring that at least 90% of the NHS fleet uses low-emissions engines (including 25% ultra-low emissions) by 2028; and phasing out primary heating from coal and oil fuel on NHS estates;
- The NHS will ensure that all trusts adhere to best practice efficiency standards and adoption of new innovations to reduce waste, water and carbon;
- Preventing illnesses from happening in the first place as the best possible way for the NHS to become the most sustainable health and care system it can be.

National Institute for Clinical Excellence (NICE) - *Air pollution: outdoor air quality and health*

In 2017, NICE produced this quality standard which aims to reduce road-traffic related air pollution and so prevent a range of health conditions and deaths. The guidelines include recommendations on:

- Reducing emissions from transport services and vehicle fleets;
- Walking and cycling;
- Increasing awareness.

Implementation of NICE Guidance is vital for the Trust to meet the Care Quality Commission (CQC) essential standards of quality and safety and other external assessments. As such, the Trust requires assessment and implementation of appropriate recommendations with an annual update.

The Sustainable Development Unit (SDU) - '*Sustainable, Resilient, Healthy People and Places*'

The SDU is the main sustainability policy body advising the NHS, Public Health and the social care system. This Sustainable Development Strategy requires all organisations to:

- Have a Board approved Sustainable Development Management Plan including carbon reduction, Adaptation Plans and actions across the sustainability agenda;
- Measure, monitor and report - Statement of progress and action on sustainable development and adaptation performance with recognisable core standard figures in annual report;
- Evaluation in order to ascertain areas of strengths and opportunities for development;
- Engage employees, service users and the public - Engagement with public, patients, clients and employees to help understand and support the development of this agenda.

The Sustainable Development Unit (SDU) - *Sustainable Development Assessment Tool (SDAT)*

In 2017, the SDU launched a replacement to the Good Corporate Citizen (GCC) tool, known as the Sustainable Development Assessment Tool (SDAT). This has now become the standard tool used by healthcare organisations, and will be used by the Trust to:

- Provide the focus for this SDMP;
- Measure annual sustainable development progress and to understand how to support progress against the UN Sustainable Development Goals;
- Measure progress by evaluating sustainability in financial, social and environmental terms;
- Measure how well activities support sustainability inside organisations and within the community.

The SDAT comprises:

Ten modules:

1. Corporate Approach
2. Asset Management & Utilities
3. Travel and Logistics
4. Adaptation
5. Capital Projects
6. Green Space & Biodiversity
7. Sustainable Care Models
8. Our People
9. Sustainable use of Resources
10. Carbon / GHGs

Four cross cutting themes:

1. Governance and Policy
2. Core responsibilities
3. Procurement and Supply chain
4. Working with Staff, Patients and Communities

f. EFFICIENCY SAVINGS: *The importance of cost reductions and energy resilience*

The business of running an NHS organisation results in a range of environmental impacts that are becoming increasingly expensive to manage:

- Finite hydrocarbons (fossil fuels) are becoming increasingly costly;
- Waste disposal is becoming increasingly costly, particularly disposal to landfill, which is subject to a tax escalator;
- Emitted carbon has an assigned market value via mandatory emissions trading schemes.

Significant financial benefits can be realised, which can be reinvested into patient care, for example:

- Reducing energy and water consumption and future proofing to improve resilience towards changes on the price and availability of energy;
- Minimising waste production, reusing and pursuing innovative disposal routes and contracts;
- Reducing demand for car parking provision through a modal shift away from single occupancy cars towards more sustainable alternatives;

- Cost minimisation/ avoidance (see *UK Guidance*). The Stern Review: *The Economics of Climate Change* (2006) concluded that mitigation outweighs the economic costs of not acting and must be viewed as an investment, a cost incurred now to avoid the risks of severe future consequences.

g. HEALTH: *What is good for the environment, is good for healthcare*

According to the Lancet, climate change is the biggest global public health challenge of the 21st century. The World Health Organisation estimates that 150,000 deaths are caused annually as a result.

Climate change threatens our health directly through exposing people to harm such as heat stroke and cold related illnesses, injuries or death during extreme weather events such as floods and through a change in patterns of infectious disease. Even more concerning is that our changing environment affects our most basic needs for a healthy life, posing a threat to global food and water security and deteriorating air quality.

Taking action now will not only reduce this risk in the long term. Action now will benefit the health of the population immediately and also benefit and support changes in the health care system as a whole. Many public health actions have 'co-benefits' to health and the environment - *what is good for the environment, is good for health*. For example, lower red meat consumption is associated with a reduced risk of colorectal cancer and a lower carbon footprint. Similarly, increased levels of active travel lead to a reduced risk of obesity, diabetes, heart disease and mild mental illness in addition to reducing road traffic injuries and deaths, and improving air quality.

h. QUALITY SERVICES and SYSTEMS: *Sustainability underpins high quality care*

The challenge to ensure that services deliver the best quality of care within the resources available is becoming increasingly apparent as costs escalate, resources diminish and climate changes to become more unpredictable. To be prepared for these changing times it is increasingly important to consider the environmental and social impact of how services are delivered. We acknowledge that NHS England and Public Health England have identified that the NHS, together with the third sector, have vital roles to play in building resilient and connected communities as part of efforts to improve health and reduce health inequalities.

In addition, preserving the values that underpin a universal health service, free at the point of use, will mean fundamental changes to how we deliver and use health and care services - *quality services and systems include sustainability as a fundamental principle*.

The principles of sustainability are aligned with the policy direction in the health and care sector (notably the NHS Long Term Plan). They provide an opportunity to think about services differently and will transform the way we design and deliver care to ensure that services are sustained and affordable in the future. This includes:

- Integrated health and social care service provision;
- Integrated connections between service providers;
- Improved use of information and communications technology (ICT);
- Supported self-care and management of long term conditions.

i. CORPORATE SOCIAL RESPONSIBILITY: *The NHS to be a leading public sector exemplar*

UHNM recognise the importance of its Corporate Responsibility and strives to fully integrate economic, social and environmental considerations into all levels of business operations.

Healthcare has a substantial impact on the environment, with an estimated NHS carbon footprint of 20 million tonnes of carbon dioxide equivalent (CO₂e). UHNM must demonstrate to partner organisations and the population that healthy people depend on a healthy environment. The rapidly

increasing risk of adverse effects on health from climate change is happening now and as one of the world's largest organisations, the NHS has a national and international duty to act and to set an important example to the business community and to the public.

2. Sustainability at UHNM: *Vision and Priorities*

2.1 A Sustainable Approach

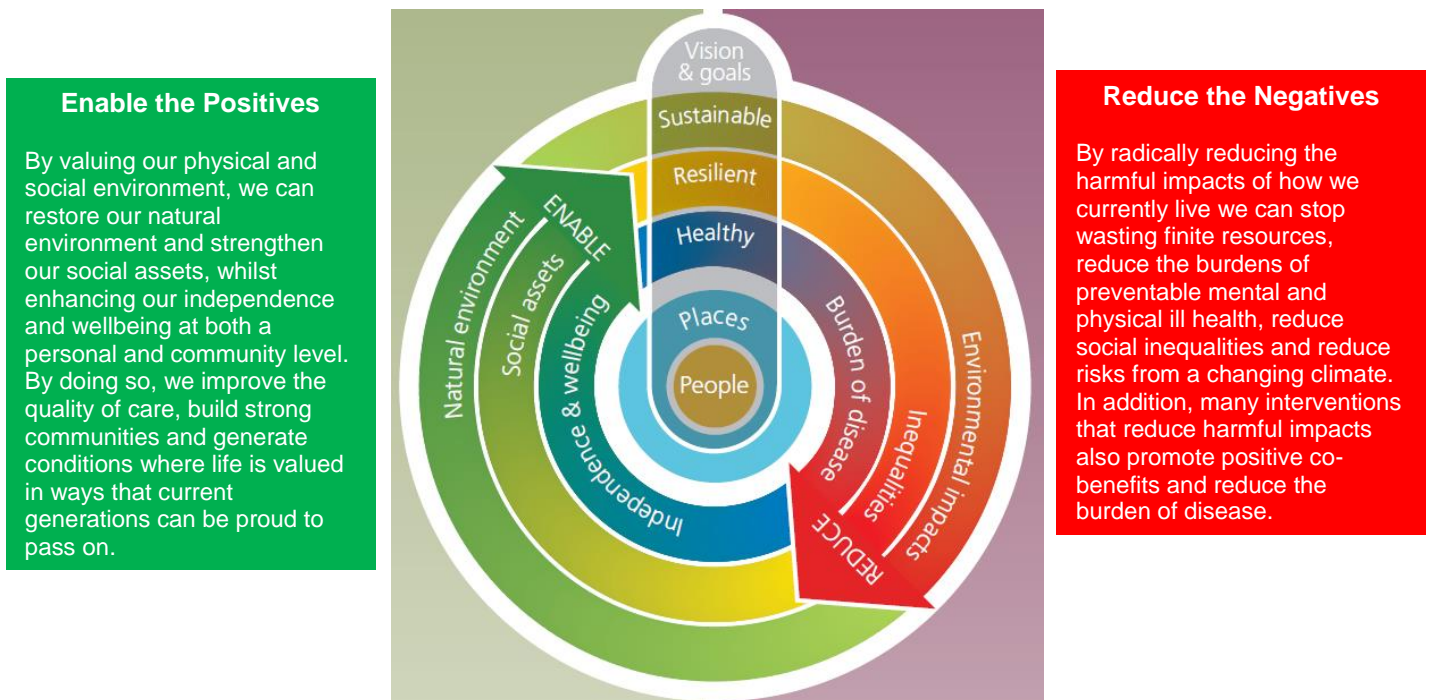
The purpose of the health and care system is to continually improve health and wellbeing and deliver high quality care when necessary.

The challenge is how to do this now and for future generations within available financial, social and environmental resources. Understanding these challenges and developing plans to achieve improved health and wellbeing and continued delivery of high quality care is the essence of sustainable development and this SDMP.

The SDMP outlines a vision and three 'Key Priorities' to aim for by 2025, considering the following:

- Opportunities to reduce the Trust's environmental impact and the potential health co-benefits;
- Increasing the Trust's readiness for changing times and climates, including preparing and responding to extreme events;
- How the Trust maximises opportunities to improve economic, social and environmental sustainability.

The diagram below demonstrates that creating sustainable, resilient, healthy places and people needs to be approached both by enabling the positives and by reducing the negatives allowing virtuous cycles to constantly improve outcomes:¹



¹ Sustainable Development Unit, 2014. Sustainable, Resilient, Healthy People & Places: A Sustainable Development Strategy for the NHS, Public Health and Social Care system [Online] Available at: <http://www.sduhealth.org.uk/policy-strategy/engagement-resources.aspx>

2.2 Vision and Priorities

2025 Vision:

The Trust is committed to delivering a world-class sustainable healthcare system that works within the available environmental, financial and social resources; protecting and improving health now and for future generations

The 2025 Vision will be delivered through a structured programme of works that will be focused around the following three Key Priorities:

Priority 1: Reduce Environmental Impact

We commit to reducing our environmental impact and benefit from a healthier environment

The NHS, public health and social care system has aligned to the revised UK Climate Change Act target (2019) to reduce all greenhouse gas emissions to net zero by 2050

Aligning with the SDAT, the following areas will be focussed upon in order to achieve reductions:

- Corporate Approach
- Asset Management and Utilities
- Travel and Logistics
- Capital Projects
- Green Space and Biodiversity
- Sustainable Use of Resources

Priority 2: Build Healthy, Sustainable and Resilient Services and Communities

We bear the responsibility of addressing the impact on our services, as a result of severe weather events such as heat waves, cold snaps and flooding.

We commit to improving the resilience of our services and built environment, ensuring they are fit for the future. We will build a connected, resilient local community that is better prepared for environmental and climatic changes through local level partnerships and collaboration.

Priority 3: Embed Sustainable Clinical and Care Models

The NHS, public health and social care system recognises that the current system is not sustainable without radical transformation. It highlights that environmental and social sustainability can be addressed alongside economic sustainability challenges, due to the principles of sustainability being aligned with the policy direction for integrated care closer to home. This provides us with an opportunity to view services differently and enable a more sustainable system.

We commit to transforming the way we deliver care in line with this direction, thereby facing two overriding challenges:

1. To drive operational improvement with financial pressures will depend on more efficient operations to ensure that our services deliver the best quality of care within the resources available
2. To secure long-term sustainable health services for patients by making fundamental changes to models of care

3. Sustainability at UHNM: *Progress to Date*

3.1 Introduction

Since publication of the first SDMP (2015–2020) ‘Our 2020 Vision: Our Sustainable Future’, UHNM has made progress towards achieving its vision of becoming ‘the most sustainable trust in the UK’. There have been challenges along the way, and some of the ambitious targets have yet to be met, but significant steps have been taken in the right direction.

In March 2017, UHNM was put into financial special measures. This has led to increased financial controls and a focus on delivering cost savings. Whilst this has presented some opportunities where environmental and social sustainability has aligned with quick-win financial savings, achieving investment for more long-term and less financially driven projects has been more challenging.

The UHNM Sustainability team has worked hard to identify innovative ways of accessing investment and working with internal and external partners to achieve progress and innovation.

3.2 Utilities

Reducing the emissions related to Energy and Water consumption was identified in the SDMP (2015–2020) as a key area of focus to achieve *Priority 1: Reduce Environmental Impact*. There is a close correlation between cost and carbon emissions as these are both directly related to consumption. As such, this is an area where investment can improve both environmental and financial sustainability. The natural tendency is for electrical consumption to increase over time as more equipment is brought into the hospitals and as utilisation of the facilities increases. Investment in more efficient equipment has allowed UHNM to counteract these increases, and reduce overall carbon emissions.

Salix Finance Funded Schemes

UHNM carried out a number of capital investment schemes using Salix Finance Energy Efficiency loans. These are interest free loans for energy efficiency measures in the public sector, and enabled UHNM to reduce its carbon dioxide equivalent (CO₂e) emissions by over 2000 tonnes per year.

The schemes are summarised in the table, and detailed in the boxes below:

Scheme	Year	Cost	Annual Savings	
			Cost	CO ₂ e
LED Phase 1	2016	£41k	£12k	46 t
Heat Recovery	2016	£672k	£183k	1,202 t
Burners	2016	£361k	£106k	580 t
LED Phase 2	2017	£175k	£46k	177 t
Totals		£1.25m	£347k	2005 t



LED Lighting

LED lighting was installed in two phases, at both Royal Stoke and County Hospitals.

Not only do the LEDs themselves save energy, some of the fittings also include dimming and motion sensing technology, so they only provide light when it is needed. The lighting was mostly installed in corridor and circulation areas where it was easier to arrange access for installation.

The LED lamps will last much longer than the fluorescent tubes that they replaced, reducing outages and maintenance costs. They also provide a brighter, whiter light which improves the look and feel of the hospitals.



Heat Recovery Unit

Installation of a Heat Recovery Unit at the Royal Stoke Energy Centre allowed for the capture and reuse of heat that would otherwise be wasted. The flue gases from all five industrial burners, plus the combined heat and power plant, are diverted away from the main chimney and into the Heat Recovery Unit.

A two stage process brings the flue gas temperatures down from around 200°C to around 40°C. This has a double benefit because not only is energy released by cooling the gases down, but the water content also condenses from gaseous to liquid state. This releases more heat, effectively turning the Energy Centre into one big condensing boiler.

High grade recovered heat is used to pre-heat the water returning to the hot water boilers that provide heating to all of the clinical buildings at Royal Stoke. Lower grade heat is used to preheat feedwater for the boilers that generate steam for sterilisation of surgical equipment.



Burner Replacement

The burners on the industrial sized steam and hot water boilers in the Energy Centre at Royal Stoke were replaced with state of the art equipment. The old burners were oversized, so were constantly switching on and off, leading to very poor efficiency and reliability.

The new burners are smaller capacity, and are also capable of controlling down to a much lower firing rate. This means that they can keep firing at a low level, maintaining consistent system temperatures and improving efficiency. They even have sensors that allow them to adjust the mixture of gas and air to ensure optimum efficiency.

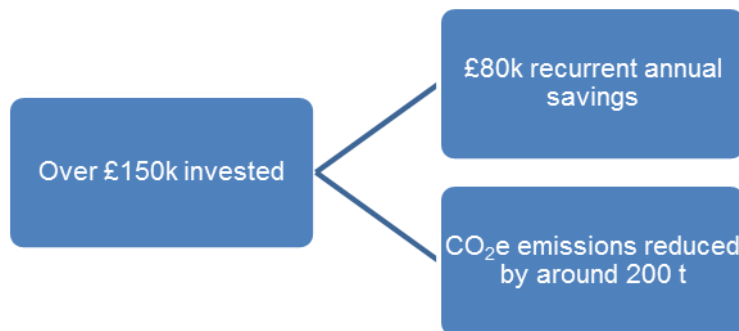
Small Energy and Water Schemes

The larger schemes outlined above have been complemented by numerous smaller low cost, quick payback initiatives. These take advantage of technical advances to increase the efficiency of the estate and are usually identified by either a member of the sustainability or maintenance teams. Examples of small schemes implemented include:

- **LED Lighting** - where opportunities arose to upgrade areas that were not picked up by the Salix Finance LED schemes;
- **Lighting Controls** – to ensure lights are only on when really needed;
- **Secondary glazing** – to reduce heat loss and energy consumption and improve patient comfort;
- **High Efficiency Motors** – replacing units that were up to 30 years old with more efficient, modern versions. This also reduced backlog maintenance liability related to the old units;

- **Motor speed controls** – to ensure that pumps and fans only run as fast as the application requires;
- **Automatic flushing controls improvements** – flushing valves are used to prevent microbiological growth in water systems. The controls were improved to prevent excess flushing;
- **Heating and Ventilation controls** – to optimise the temperatures and air-flows to ensure patient comfort whilst minimising energy consumption and cost.

Summary of Small Schemes benefits (2015 to 2019)



3.3 Travel and Transport

Travel and Transport was also a key area of focus to achieve *Priority 1: Reduce Environmental Impact*. UHNM is responsible for generating a large number of patient and visitor trips and associated traffic and congestion in the surrounding area. The Trust also has a fleet of vehicles which are used to transport supplies, waste, notes and samples around the sites and throughout the local area.

Focus has been on making active travel more feasible, encouraging bus patronage as well making car based travel more sustainable. Examples of initiatives implemented include:

- **Electric Fleet** – The UHNM Transport fleet was refreshed in 2016, replacing 9 diesel vans with Nissan e-NV200 electric vans. These have been well received by the drivers, and are ideal for multiple-drop short journeys. It is estimated that this change has saved ~9 tonnes of CO₂ emissions per year, compared to the diesel equivalent. The lease on these vehicles expires in 2020, and it is envisaged that electric vehicles will be the only option considered for replacement;
- **Electric Vehicle (EV) Charging Points** - Four electric vehicle charging points were installed at Royal Stoke in 2016. These EV points are accessible to both employees and staff and complement the two EV points already in place at County Hospital. Every month, over 100 vehicle charges take place at Royal Stoke alone;
- **Bus Ticket Discounts** – Working with local bus companies to arrange for discount tickets to be available to staff. Promoting bus travel as a cheap and convenient alternative to commuting by car;
- **Cycle to Work scheme** – Offering staff a discounted way of purchasing a bicycle to commute to work on. The Trust also offered a “Dr Bike” service to help staff with maintenance of new or old bicycles;



- **Walking Routes** – Encouraging staff and visitors to get active by following one of the way-marked routes on each site. It is hoped that this will encourage people who live close to the site to leave the car at home.

3.4 Behaviour Change

It is recognised that staff behaviour has a major impact on the sustainability of an organisation. As such, staff engagement has been facilitated through the *SWITCH To a Sustainable UHNM Campaign*.

There are now more than 150 'SWITCH Champions', who are an important network of employee volunteers, located throughout the Trust, helping to deliver the *SWITCH To a Sustainable UHNM Campaign*. The campaign aims to empower individuals to make lasting and meaningful change through promoting and encouraging a switch to more sustainable behaviours. The production of efficiency savings will ultimately improve patient care and lead to a more sustainable, health promoting Trust.

The SWITCH champions provide top-down support to current sustainability initiatives and campaigns to ensure that they become embedded in their local work areas. They will also act as a point of contact to departmental employees and provide a valuable source of information, ideas and opinions; creating a powerful bottom-up approach.

Regular communications have been sent out to the SWITCH Champions, and to the wider staff body. These are organised into the themes of Travel and Transport, Energy, Water, Waste and Patient Care.



Thermometer Cards

One of the big areas of conflict relating to utility consumption is surrounding environmental temperatures, particularly in office areas where people have sedentary jobs. There is a lot of subjectivity on how different people perceive temperature, and this can lead to conflict in the workplace, frequent calls to the estates helpines and unsanctioned use of electric heaters. In comparison to using the installed system to provide heating, using electricity results in higher costs and carbon emissions and also gives rise to an increased risk of fire.

As a result of this, thermometer cards were produced and distributed to allow staff to see the actual temperature and to see what temperature their area should be heated to in cold weather. The target temperature in offices was even increased slightly to make it a more comfortable temperature for staff to work in. This resulted in a noticeable reduction in calls to the helpline, regarding temperatures



3.5 Sustainable Clinical and Care Models - 'Saving Lives with Solar'

In 2016, UHNM delivered a pioneering community energy scheme; 'Saving Lives with Solar'. The scheme seeks to prevent readmissions of vulnerable patients whose health conditions are at risk of being exacerbated by living in cold and damp homes. The scheme comprises a partnership between:

- University Hospitals North Midlands (UHNM)
- Southern Staffordshire Community Energy (SSCE)
- Staffordshire fuel poverty charity 'Beat the Cold'
- The community (shareholders)

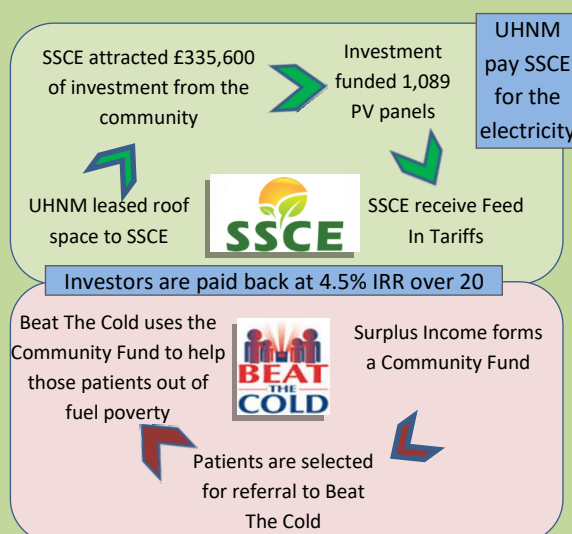
'Saving Lives with Solar' – Community Energy Scheme

The Project

Buying the electricity generated by the PV panels reduces demand on the grid and gives UHNM a cheaper, more resilient supply.

SSCE receive income from Feed-in-Tariffs, and from UHNM for the electricity. This facilitates a return for the investors, and a surplus which accumulates into an annual 'community fund'. There is an agreement to spend the community fund on alleviating fuel poverty in Staffordshire.

UHNM Consultants in Respiratory and Elderly Medicine and their teams currently engage with appropriate patients and gain consent to refer them into the scheme. Upon discharge, Beat the Cold team will arrange a home visit to help facilitate a safe temperature and affordable warmth.



This intervention is funded entirely by the 'community fund' and is at zero cost to UHNM.

Fuel Poverty: The case for an intervention

Approximately 14.5% of households in Staffordshire and Stoke-on-Trent are classified as being in fuel poverty. This is markedly higher than the national average of 10.5%.

Patient intervention

By targeting patients in Respiratory and Elderly Medicine, the service operates in line with NICE guidance NG6 – Excess Winter Deaths and Cold Related Health. These cohorts are specified as having an underlying health condition that would increase susceptibility to ill health and exacerbated illness, if subject to a cold or damp home or environment.

A home visit by Beat the Cold will comprise:

- Identify ways to safely reduce energy use, while maintaining a safe indoor temperature
- Identify the most appropriate energy tariff and support a supplier switch
- Identify any funding available to facilitate energy efficiency and support in the application
- Assist with any issues surrounding fuel debt, or other problems with the energy supplier

Scheme Performance

	Community Fund	Number of home visits	UHNM Cost Saving	CO ₂ Emissions Saving
2017/18	£12,075	105	£1,842	69 t
2018/19	£32,577	283	£3,892	61 t

Scheme Credentials

- The scheme was launched by Prof. John Middleton, President of the UK Faculty of Public Health
- The scheme is a first of its kind for the NHS and was 'Highly Commended' at the 2016 HSJ awards
- The scheme has been a catalyst to several further investments in the fuel poverty and cold related ill health agenda, across the Staffordshire health economy.

4. Sustainability at UHNM: *What will it look like?*

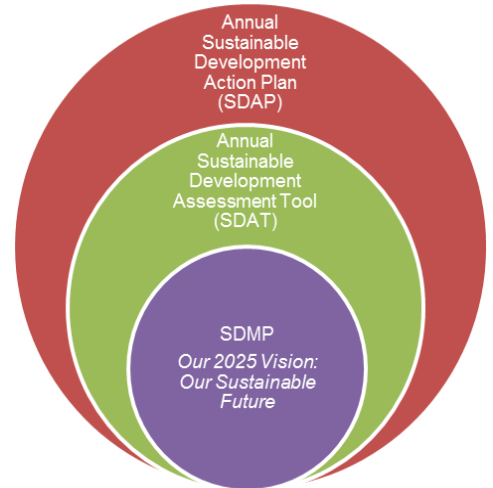
4.1 Overview

This SDMP 'Our 2025 Vision: Our Sustainable Future' forms the core of the UHNM governance structure for Sustainable Development.

The SDMP establishes objectives and targets across several themes which are aligned to the national direction, as outlined by the Sustainable Development Unit's (SDU) Sustainable Development Assessment Tool (SDAT). Through alignment to the SDAT, the SDMP is further aligned to the international direction, as outlined by the United Nations Sustainable Development Goals (SDGs).

Each theme has an assigned 'Operational Lead', 'Responsible Lead' and 'Responsible Director'. The structure is such that the agenda becomes embedded across the Trust.

As outlined on the diagram to the right, at the end of each year, the SDAT will be carried out in order to understand where good progress has been made and also highlight where progress is lacking or slowing down, which then provides the priorities for the year ahead. These priorities will inform the annual Sustainable Development Action Plan (SDAP) which will be produced at the beginning of each year. The projects and actions will progress both the SDAT scoring and working towards achieving the SDMP 2025 Vision, Priorities and targets.



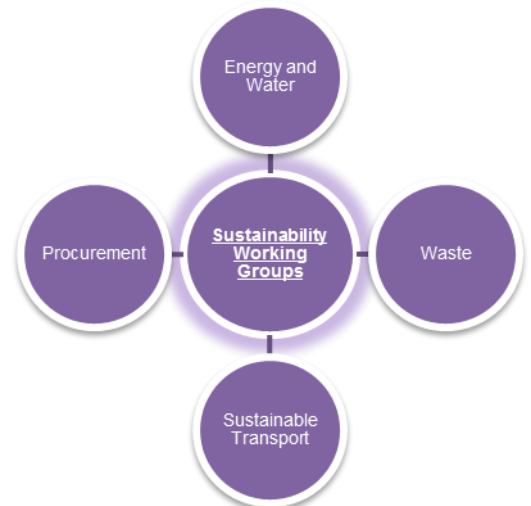
4.2 Governance

Sustainability Working Groups

Each month, Sustainability Working Groups, and their members, will meet to drive the respective agenda forwards with regard to their specialist component of the SDMP.

The Working Groups will comprise:

1. Energy and Water (Joint Trust and Sodexo)
2. Waste
3. Sustainable Transport
4. Procurement / use of resources



Project Co. / PFI contractors

Sustainability is part of the project agreement for the Private Finance Initiative (PFI) hospital and areas such as energy consumption and water use are monitored carefully as part of the contract. Schedule 14 of the project agreement proposes wide ranging obligations on Project Co. in respect of monitoring energy usage and encouraging efficient usage. The main vehicle for this is the joint Trust / Project Co. Energy and Water Efficiency Committee which makes non-binding recommendations and good housekeeping measures to the Trust. The Committee meet quarterly.

Estates, Facilities and PFI (EFP) Divisional Board Meeting (DBM)

The Head of Sustainability and Transformation will report progress on delivery of the SDMP to the Estates, Facilities and PFI Divisional Board ('Strategy, Ops and Planning' and 'Performance and Transformation') monthly meetings, chaired by Deputy Director of Estates, facilities and PFI, Barry Deacon.

Sustainable Development Steering Group (SDSG)

In light of the recent new appointments to the Trust senior management team (CEO and Executives), there is a need to re-establish the Sustainable Development Steering Group (SDSG). As such, the SDSG will form a strategic, high level group which will meet biannually and be chaired under Director leadership.

The SDSG will draw together the following representatives:

- Operational leads across all of the SDMP themes
- Executive Director and Director of Estates, Facilities and PFI (Lorraine Whitehead)
- Finance lead (Sarah Preston)
- Clinical lead (Consultant)
- Senior Nurse, Clinical Procurement (Clare Nash)
- Chairman (to be confirmed)

The SDSG will have the following objectives:

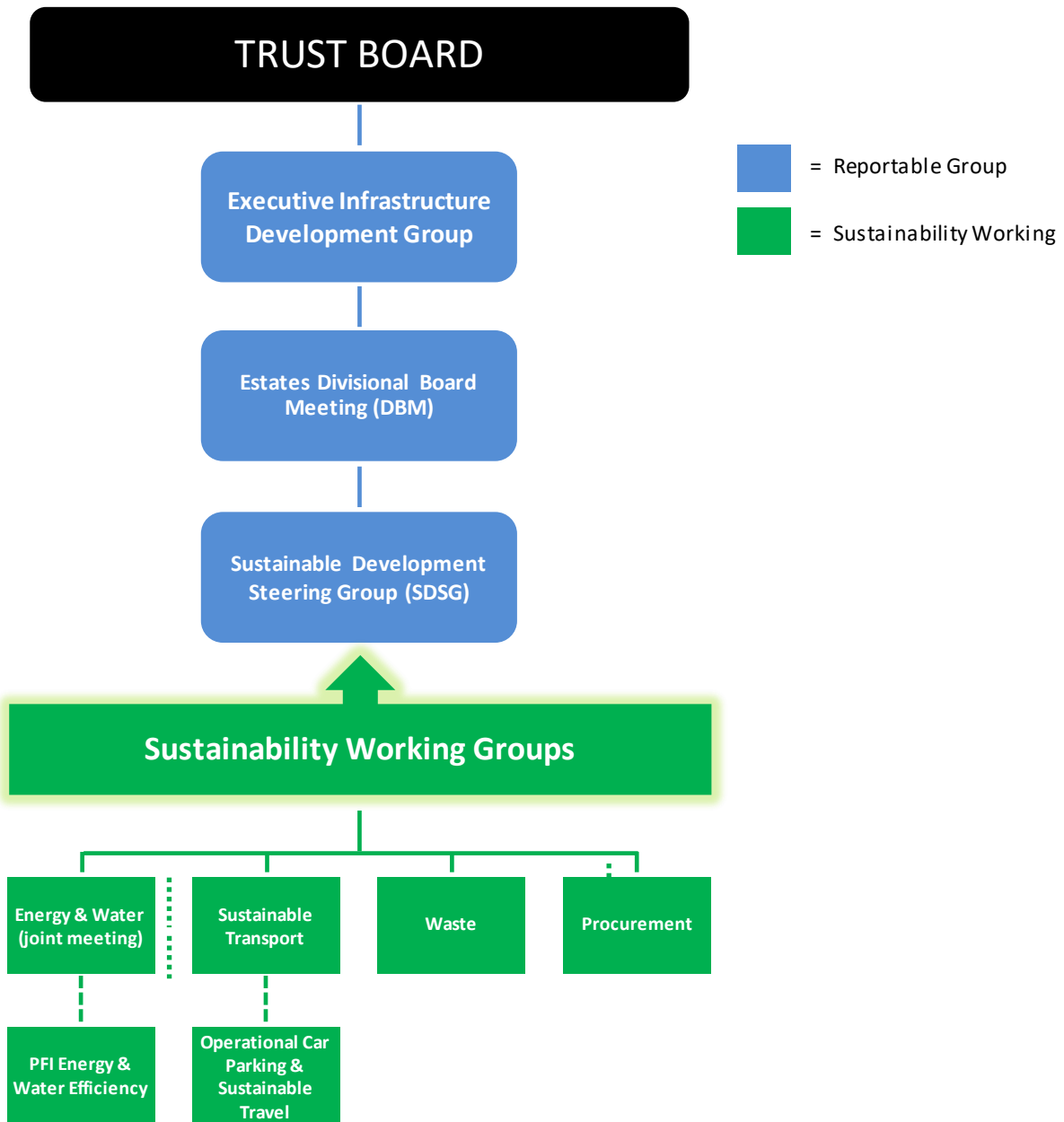
- Review the mid-year progress on all of the SDMP themes and year-end SDAT scores
- Provide leadership and support that steers the direction and assists the progress the SDMP
- Provide a forum, for the discussion of information and knowledge sharing, that facilitates best practise and ensures that all members are updated, beyond their areas of specialism
- Take decisions on matters of policy as required
- Ensure that there is a continual focus on opportunities for improvement in sustainable development and carbon reduction
- Champion capital allocation for sustainability initiatives
- Identify non-completed actions / areas within the SDMP, new legislation and policy direction and escalate through the relevant governance structure for immediate address

Executive Leadership

Sustainable development is a corporate responsibility and is an inherent part of UHNM's performance and governance mechanisms. The Estates, Facilities and PFI Directorate takes overall responsibility for the development of the Trust's SDMP, under the Executive leadership of the Director of Estates, Facilities and PFI (Lorraine Whitehead).

Lorraine Whitehead is a member of the SDSG and is accountable to the Board; demonstrating the commitment of the Trust to the environment and sustainability agenda. In addition, the new SDSG aspires to have the membership of a Finance lead, Clinical lead (Consultant), Clinical Procurement, and Chairman.

4.3 UHNM Sustainability Governance Structure



5. Priority 1: Action Plan²

Priority 1: Reduce Environmental Impact

We commit to reducing our environmental impact and benefit from a healthier environment

The NHS, public health and social care system has aligned to the revised UK Climate Change Act target (2019) to reduce all greenhouse gas emissions to net zero by 2050

Aligning with the SDAT, the following areas will be focussed upon in order to achieve reductions:

- Corporate Approach
- Asset Management and Utilities
- Travel and Logistics
- Capital Projects
- Green Space and Biodiversity
- Sustainable Use of Resources

² See Appendix A for the full Action Plan

5.1 Corporate Approach (Governance)

What do we want to achieve?

<p>In order to ensure the long-term success of the sustainability agenda, including carbon reduction, it is critical that the Trust has a robust and embedded governance structure and process in place. This will include regular engagement and reporting across all areas of the Trust and to external stakeholders in order to identify progress, barriers, opportunities and initiate ideas and support.</p>	
Objectives	<p>There is a positive workplace culture whereby carbon reduction and sustainability is fully embedded</p> <p>Executives and the Board are committed to delivering the SDMP and its statutory obligations</p> <p>All Trust employees are engaged, empowered and motivated to take action on sustainability and to deliver high quality care today that does not compromise the ability to deliver care in the future</p>
SDMP Target	<ul style="list-style-type: none"> ▪ To contribute to reducing all greenhouse gas emissions to net zero by 2050, in line with the NHS, public health and social care system and UK Climate Change Act target (2019) ▪ Increase in the number of SWITCH champions, year on year by 10%; ▪ Each month, a sustainability communication will be issued throughout the Trust in order to raise awareness and facilitate behavioural change ▪ Each month, progress on delivery of the SDMP will be reported to the EFP Divisional Board monthly meetings ▪ Every 6 months, SDMP key performance indicators will be reported to the Board, encompassing; utilities, carbon, use of resources, and travel ▪ Every 6 months, the SDSG meet with attendance by Executive, Finance and Clinical leads to ensure that responsibility and accountability for sustainable development is clear ▪ Once a year (end of year), the SDAT will be carried out in order to understand where good progress has been made and where progress is lacking. This will include quantifying annual carbon emissions, reduction projections and the way in which those projections will be achieved (<i>as required by the NHS Contract</i>). Report to be issued to the Board ▪ Once a year (beginning of year) the SDAP will be produced outlining the projects and actions that will progress both the SDAT scoring and working towards achieving the SDMP 2025 Vision, Priorities and targets
Operational Lead	UHNM Sustainability Manager
Responsible Lead	Louise Stockdale, Head of Sustainability and Transformation
Responsible Director	Barry Deacon, Deputy Director Estates, Facilities and PFI
Responsible Board Member	Lorraine Whitehead, Director Estates, Facilities and PFI

UN Sustainable Development Goals

The Trust will contribute to Goals 11, 12, 13 and 17 through its Corporate Approach



5.2 Asset Management and Utilities

What do we want to achieve?

Energy use contributes 22% of the total NHS carbon footprint (SDU).

Consumption of utilities (energy and water) in UHNM buildings costs over £8.5 million pounds, and produces 24,000 tonnes of CO₂ emissions every year. As such, there is significant scope for achieving efficiency savings, which can then be directly reinvested into improved patient care.

UHNM understands that there is a close correlation between cost and carbon emissions as these are both directly related to consumption. As such, if the demand for utilities is reduced, significant improvements can be made to both environmental and financial sustainability.

Objectives	To reduce utility consumption and therefore CO ₂ emissions from the UHNM estate
SDMP Target	<ul style="list-style-type: none"> ▪ To contribute to reducing all greenhouse gas emissions to net zero by 2050, in line with the NHS, public health and social care system and UK Climate Change Act target (2019) ▪ To minimise utility consumption in existing facilities through staff engagement, monitoring of consumption, improved controls and upgrades to heating, lighting, ventilation and insulation ▪ To reduce utility consumption by replacing the least efficient buildings with state of the art highly efficient facilities ▪ To eliminate CO₂ emissions related to energy consumption through renewable generation of electricity and heat
Operational Lead	Charlie Cox, Energy Manager
Responsible Lead	Louise Stockdale, Head of Sustainability and Transformation
Responsible Director	Barry Deacon, Deputy Director of Estates, Facilities and PFI
Responsible Board Member	Lorraine Whitehead, Director of Estates, Facilities and PFI

UN Sustainable Development Goals

The Trust will contribute to Goals 1, 3, 6, 7, 10, 11, 12, 13 and 17 through its Asset Management and Utilities.



5.3 Travel and Logistics

What do we want to achieve?

UHNM is a large acute Trust and employs more than 11,000 people, thereby making it a major employer in Staffordshire. In addition, being a regional specialist centre for many services and a major trauma centre, means that the Hospitals are responsible for generating a large number of patient and visitor trips and associated traffic and congestion in the surrounding area.

In England, a total of 5% of all road traffic is associated with the NHS and travel equates to 18% of the NHS carbon footprint (SDU).

Reducing the carbon impact from vehicular travel and thereby making a positive contribution to the local community by reducing air pollution, is now a national priority. This can only be achieved by making active travel more feasible, encouraging bus and rail patronage as well making car based travel more sustainable through facilitating car sharing and provision for electric vehicles.

Providing realistic travel options will reduce demand for car parking spaces and promote health and wellbeing for employees, patients, visitors and the local community.

Objectives	<p>To assist employees, patients and visitors to travel by active and low carbon modes (walking, cycling, public transport and electric vehicles)</p> <p>Providing a realistic choice of access by all modes of transport</p> <p>There is a culture which embraces alternative practises such as agile working and clinical service digitalisation, in order to reduce staff and patient travel</p> <p>Reduce the carbon and air quality impacts of the Trust and supply chain and in doing so make a positive contribution to the local community</p>
SDMP Target	<ul style="list-style-type: none"> ▪ To contribute to reducing all greenhouse gas emissions to net zero by 2050, in line with the NHS, public health and social care system and UK Climate Change Act target (2019) ▪ Travel Plans (2020-2025) will be produced for both sites, by 2020. The SDMP will mirror incorporated travel targets ▪ Once a year (end of year), the Health Outcomes of Travel Tool (HOTT) self-assessment will be carried out as a benchmark and to evaluate the success of changes implemented. A report will be issued to the Board and Trust-wide ▪ Once a year (beginning of year) an Employee Travel Survey will be carried out in order to establish the current employee commuting baseline and thereafter measure shifts in modes of transport
Operational Leads	Louise Stockdale, Head of Sustainability and Transformation
Responsible Lead	UHNM Sustainability Manager
Responsible Director	Barry Deacon, Deputy Director of Estates, Facilities & PFI
Responsible Board Member	Lorraine Whitehead, Director of Estates, Facilities and PFI

UN Sustainable Development Goals

The Trust will contribute to Goals 3, 11, 13 and 17 through its Travel and Logistics.



5.4 Capital Projects

What do we want to achieve?

Over recent years, the Trust estate has undergone extensive change and upgrade to enable the remodelling and reconfiguration of services, particularly during the merger of UHNS and MSFT. The estate will continue to change, be developed and areas will undergo refurbishment as the Trust services change and backlog maintenance is addressed.

As the changes are made, it is important that sustainability forms part of the design brief for all new buildings and refurbishment works to ensure they are designed and operated as efficiently as possible. This also applies to minimising impacts during demolition and construction. In addition, adapting the estate to the effects of climate change, including flexible design, is essential.

The approach will be to implement resource efficiency (including energy, water and use of natural materials) simultaneous to the delivery of best value through effective space utilisation, consolidation and rationalisation.

Objectives	<p>Sustainability considerations are inherent in decision making when planning a capital project</p> <p>National priorities are inherent in our Estates Strategy. This includes the delivery of best value through effective space utilisation, consolidation, rationalisation (closure and disposal of dilapidated and least efficient properties)</p> <p><i>All new and refurbished estate will:</i></p> <ul style="list-style-type: none"> ▪ Have a significantly lower carbon impact, in their construction, lifetime and in their decommissioning. This will be achieved by relevant building projects achieving the required Building Research Establishment Environmental Assessment Methodology (BREEAM) Healthcare rating ▪ Be designed to facilitate; resilience against climate change and weather extremes, promote sustainable behaviours and be adaptable to support change towards low carbon patient pathways/ sustainable models of care
SDMP Target	<ul style="list-style-type: none"> ▪ To contribute to reducing all greenhouse gas emissions to net zero by 2050, in line with the NHS, public health and social care system and UK Climate Change Act target (2019) ▪ Production of a Sustainability Impact Assessment, by 2020 ▪ Production of a Contractor Briefing Document, by 2021 ▪ Achieve BREEAM rating of 'Excellent' (for new builds) and 'Very Good' (for refurbishments) ▪ A complete at least one major sustainability capital scheme per year
Operational Lead	UHNM Sustainability Manager
Responsible Lead	Ash Chudasama, Deputy Capital Project Director
Responsible Director	Barry Deacon, Deputy Director of Estates, Facilities & PFI
Responsible Board Member	Lorraine Whitehead, Director of Estates, Facilities & PFI

UN Sustainable Development Goals

The Trust will contribute to Goals 6, 7, 12, 13 and 17 through its Capital Projects.



5.5 Green Space and Biodiversity

What do we want to achieve?

The Trust is committed to protecting and enhancing the natural environment, including the prevention of pollution.

The Trust recognises the value of the natural environment which plays a key role in our wellbeing, improving patient recovery rates and patient experience, particularly within mental health. As a result, the inclusion of green infrastructure across the estate is a vital resource. Green spaces also provide a habitat for wildlife which contributes to Staffordshire's wider biodiversity network.

Managing our green spaces effectively can enrich biodiversity, improve air quality, reduce noise, provide shading during times of extreme heat and also reduce local surface water flooding.

Objectives	<p>The protection and enhancement of natural assets is inherent within the Trust's Estates Strategy and is managed through key linkages between Estates (Grounds and Gardens), Sustainability, Wellbeing and the Arts agenda</p> <p>The Trust maximises access to natural assets for the benefit of people's health and wellbeing and for the prevention of avoidable illness</p>
SDMP Target	<ul style="list-style-type: none"> ▪ To contribute to reducing all greenhouse gas emissions to net zero by 2050, in line with the NHS, public health and social care system and UK Climate Change Act target (2019) ▪ Production of a Board approved Green Space and/or Biodiversity Action Plan / Strategy, by 2021
Operational Lead	UHNM Sustainability Manager
Responsible Lead	Louise Stockdale, Head of Sustainability and Transformation
Responsible Director	Barry Deacon, Deputy Director Estates, Facilities and PFI
Responsible Board Member	Lorraine Whitehead, Director Estates, Facilities and PFI

UN Sustainable Development Goals

The Trust will contribute to Goals 3, 13 and 15 through its Green Space and Biodiversity



5.6 Sustainable Use of Resources

What do we want to achieve?

Procurement accounts for almost 60% of the NHS's overall carbon footprint (SDU). The majority is generated by the production, transportation and disposal of pharmaceutical and medical devices/ instruments.

The best financial and environmental option is to avoid producing waste in the first place; thereby saving on both purchasing and disposal costs. Where waste cannot be avoided, the next most environmentally favourable option is reuse, followed by correctly segregating waste to allow for the most financially and environmentally appropriate disposal solution.

UHNM is committed to adopting sustainable waste management practises, such as the waste hierarchy, in order to maximise the practical benefits from products and minimise the amount of waste generated. The Trust also recognises the wider benefits of this, including a reduction in emissions, energy and pollution, conservation of resources and bolstering of the local economy.

Objectives	<p>Presence of high and compliant standards for waste management from the point of generation to the point of disposal</p> <p>In the first instance, work across all departments to minimise the amount of waste produced</p> <p>When waste is produced, increase the amount of waste that is reused, improve waste segregation and give more precedence to recycling</p> <p>There is a culture that challenges the use and selection of single-use items</p> <p>There is a culture that considers the quality of consumables in order to use less</p>
SDMP Target	<ul style="list-style-type: none"> ▪ To contribute to reducing all greenhouse gas emissions to net zero by 2050, in line with the NHS, public health and social care system and UK Climate Change Act target (2019) ▪ Quantified progress over a series of years to: <ul style="list-style-type: none"> ▪ Reduce the procurement of single-use plastic items ▪ Increase the reuse of items that don't have direct patient contact ▪ Correct segregation, with quantified progress over a series of years to: <ul style="list-style-type: none"> ▪ Reduce the proportion of infectious (hazardous) waste ▪ Increase the proportion of non-infectious (non-hazardous) waste ▪ Introduce a recyclable waste stream across all areas of the Trust, by 2025 ▪ Whole life cycle costs and environmental impacts are taken into account during the procurement decision making process, by 2025
Operational Lead	<p>Phill Mountford, Waste Manager UHNM Sustainability Manager Clare Nash, Senior Nurse, Clinical Procurement</p>
Responsible Lead	<p>Louise Stockdale, Head of Sustainability and Transformation</p>
Responsible Director	<p>Barry Deacon, Deputy Director Estates, Facilities and PFI</p>
Responsible Board Member	<p>Lorraine Whitehead, Director Estates, Facilities and PFI</p>

UN Sustainable Development Goals

The Trust will contribute to Goals 9, 12, 13 and 17 through its Sustainable Use of Resources.



6. Priority 2: Action Plan³

Priority 2: Build Healthy, Sustainable and Resilient Services and Communities

We bear the responsibility of addressing the impact on our services, as a result of severe weather events such as heat waves, cold snaps and flooding.

We commit to improving the resilience of our services and built environment, ensuring they are fit for the future. We will build a connected, resilient local community that is better prepared for environmental and climatic changes through local level partnerships and collaboration.

³ See Appendix A for the full Action Plan

6.1 Adaptation: building resilience to climate change and adverse events

What do we want to achieve?

Climate change adaptation means responding to the projected and current impacts of climate change and adverse weather events. Adaptation for the health and care system is two-fold:

1. Climate change can negatively impact the physical and mental health and wellbeing of the UK population. The NHS needs to be prepared for different volumes and patterns of demand
2. Climate change could impact the operational delivery of the health and care system. The system infrastructure (e.g. buildings, communications) and supply chain (e.g. fuel, care supplies) need to be prepared for and resilient to weather events and other crises.

The Trust recognises that it is an integral part of the local community, as an employer and as a core public service provider. It has an important role to support the community to thrive, be more sustainable, resilient and healthy in changing times and climates. As such, in delivering an effective adaptation and resilience strategy, it is essential to adopt a cross-sector approach involving local authorities, third sector, communities and other health and social care providers.

Objectives	<p>The Trust understands the risks posed from a changing climate and has a Board approved Adaptation Plan whereby implementation progress is reported within the Annual Report</p> <p>The Trust is a part of a system-wide approach with local planning arrangements for adapting to climate change</p>
SDMP Target	<ul style="list-style-type: none"> ▪ To contribute to reducing all greenhouse gas emissions to net zero by 2050, in line with the NHS, public health and social care system and UK Climate Change Act target (2019) ▪ Production of a Board approved Climate Change Adaption Plan to ensure business continuity in a changing climate, by 2021 ▪ Integration of climate change resilience preparedness and the Major Incident Response and Recovery Plan, by 2021 ▪ The Trust is part of a system-wide, integrated response to climate resilience and adaptation, by 2021
Operational Leads	UHNM Sustainability Manager
Responsible Lead	Louise Stockdale, Head of Sustainability and Transformation
Responsible Director	Barry Deacon, Deputy Director Estates, Facilities and PFI
Responsible Board Member	Lorraine Whitehead, Director Estates, Facilities and PFI

UN Sustainable Development Goals

The Trust will contribute to Goals 3, 12, 13 and 17 through Adaptation.



7. Priority 3: Action Plan⁴

Priority 3: Embed Sustainable Clinical and Care Models

The NHS, public health and social care system recognises that the current system is not sustainable without radical transformation. It highlights that environmental and social sustainability can be addressed alongside economic sustainability challenges, due to the principles of sustainability being aligned with the policy direction for integrated care closer to home. This provides us with an opportunity to view services differently and enable a more sustainable system.

We commit to transforming the way we deliver care in line with this direction, thereby facing two overriding challenges:

1. To drive operational improvement with financial pressures will depend on more efficient operations to ensure that our services deliver the best quality of care within the resources available
2. To secure long-term sustainable health services for patients by making fundamental changes to models of care

⁴ See Appendix A for the full Action Plan

7.1 Embed Sustainable Clinical and Care Models

What do we want to achieve?

UHNM is committed to working in different ways in order to deliver more sustainable health and care. Evidence has shown that the need for acute and specialist interventions can be minimised when there is a system-wide focus on living well and supporting people to manage their lives in a positive way.

In line with the NHS Long Term Plan, this will involve developing an integrated care system (ICS) in order to achieve system-wide efficiency, quality, health outcomes and equity. This requires a move towards expertise in primary and community-based health and social care in order to develop services and systems that are designed around patients and their physical, psychological and social needs.

Objectives	<p>UHNM provides quality services and systems that include sustainability as a fundamental principle. This means minimising environmental impacts, enhancing health and building resilience with individuals and their communities</p> <p>UHNM is a health promoting Trust that develops a physical environment, corporate identity and culture that embraces health promotion and reducing health inequalities. The Trust will empower individuals to make lasting change for the benefit of the Trust, patients and local community</p> <p>UHNM and other key stakeholder leaders work in partnership (via the ICS) with a focus on prevention, health improvement, enabling independence to build stronger communities</p>
SDMP Target	<p>By 2025:</p> <ul style="list-style-type: none"> Service transformations deliver improved health outcomes coupled with social and environmental benefits Sustainability is a core and measurable dimension that underpins quality Funding solutions and contracts that incentivise more sustainable models of care and enable the reconfiguration of services away from acute settings are jointly developed by commissioners and providers
Operational Leads	David Perry, Head of Transformation Louise Stockdale, Head of Sustainability and Transformation
Responsible Lead	Louise Stockdale, Head of Sustainability and Transformation
Responsible Director	Barry Deacon, Deputy Director Estates, Facilities and PFI
Responsible Board Member	Lorraine Whitehead, Director Estates, Facilities and PFI

UN Sustainable Development Goals

The Trust will contribute to Goals 3, 10, 11, 16 and 17 through embedding sustainable clinical and care models.



APPENDIX A

Priority 1: Action Plan

Priority 1: Reduce Environmental Impact

We commit to reducing our environmental impact and benefit from a healthier environment

The NHS, public health and social care system has aligned to the revised UK Climate Change Act target (2019) to reduce all greenhouse gas emissions to net zero by 2050

Aligning with the SDAT, the following areas will be focussed upon in order to achieve reductions:

- Corporate Approach
- Asset Management and Utilities
- Travel and Logistics
- Capital Projects
- Green Space and Biodiversity
- Sustainable Use of Resources

Corporate Approach (Governance)

What do we want to achieve?

<p>In order to ensure the long-term success of the sustainability agenda, including carbon reduction, it is critical that the Trust has a robust and embedded governance structure and process in place. This will include regular engagement and reporting across all areas of the Trust and to external stakeholders in order to identify progress, barriers, opportunities and initiate ideas and support.</p>	
Objectives	<p>There is a positive workplace culture whereby carbon reduction and sustainability is fully embedded</p> <p>Executives and the Board are committed to delivering the SDMP and its statutory obligations</p> <p>All Trust employees are engaged, empowered and motivated to take action on sustainability and to deliver high quality care today that does not compromise the ability to deliver care in the future</p>
SDMP Target	<ul style="list-style-type: none"> ▪ To contribute to reducing all greenhouse gas emissions to net zero by 2050, in line with the NHS, public health and social care system and UK Climate Change Act target (2019) ▪ Increase in the number of SWITCH champions, year on year by 10%; ▪ Each month, a sustainability communication will be issued throughout the Trust in order to raise awareness and facilitate behavioural change ▪ Each month, progress on delivery of the SDMP will be reported to the EFP Divisional Board monthly meetings ▪ Every 6 months, SDMP key performance indicators will be reported to the Board, encompassing; utilities, carbon, use of resources, and travel ▪ Every 6 months, the SDSG meet with attendance by Executive, Non-Executive and Clinical leads to ensure that responsibility and accountability for sustainable development is clear ▪ Once a year (end of year), the SDAT will be carried out in order to understand where good progress has been made and where progress is lacking. This will include quantifying annual carbon emissions, reduction projections and the way in which those projections will be achieved (<i>as required by the NHS Contract</i>). Report to be issued to the Board ▪ Once a year (beginning of year) the SDAP will be produced outlining the projects and actions that will progress both the SDAT scoring and working towards achieving the SDMP 2025 Vision, Priorities and targets
Operational Lead	UHNM Sustainability Manager
Responsible Lead	Louise Stockdale, Head of Sustainability and Transformation
Responsible Director	Barry Deacon, Deputy Director Estates, Facilities and PFI
Responsible Board Member	Lorraine Whitehead, Director Estates, Facilities and PFI

How can we achieve it?

- The Trust will develop a Sustainability Impact Assessment (SIA) in order to consider sustainable development as standard, in all project initiation documents (PIDs) and business cases;

- The Trust will develop a communications plan to ensure engagement with employees, patients and local stakeholders on issues of the Sustainable Development Management Plan (SDMP);
- The Trust will report sustainability performance via the Annual Report. Reporting will reflect clear quantified progress over a series of years and be aligned to the Sustainable Development Unit (SDU) reporting tool - the Sustainable Development Assessment Tool (SDAT);
- The Trust will monitor the implementation of the SDMP and adjust the Sustainable Development Action Plan (SDAP) accordingly in order to maximise value and benefit;
- The Trust will deliver the *SWITCH To a Sustainable UHNM* Campaign through monthly engagement with the SWITCH Champions. The campaign will include:
 - Behaviour change – breaking bad (wasteful) habits and making new (efficient) habits
 - Strengthening and expanding the network of SWITCH Champions
 - Increasing the use of the intranet, website and social media to disseminate messages
- The Trust will manage sustainability risks during the procurement process, where key potential contracts undergo an assessment of the sustainability impacts and opportunities;
- The Trust will communicate sustainability commitments to suppliers and engage with them to work in partnership to help implement the Trust's SDMP vision;
- The Trust will engage with local strategic partners in the development of the SDMP, Travel Plans and Climate Change Adaptation Plan in order to maximise sustainable development outcomes;
- The Trust will lead local sustainability forums/ networks/ groups with stakeholders in order to demonstrate leadership in sustainability and generate cross-organisation innovation and projects.

How will we measure it?

- Calculating and reporting the annual progress towards the NHS, public health and social care system and UK Climate Change Act target (2019);
- The number of SWITCH champions;
- The number, frequency and 'hits' of sustainability communications to employees;
- The frequency of communications to Estates, Facilities and PFI Divisional Board meetings on the progress on delivery of the SDMP (monthly);
- The frequency of communications to the Trust Board including:
 - SDMP key performance indicators (every 6 months) (See Appendix C for an example)
 - SDAT performance (once a year)
- The frequency and attendance of the SDSG.

UN Sustainable Development Goals

The Trust will contribute to Goals 11, 12, 13 and 17 through its Corporate Approach



Asset Management and Utilities

What do we want to achieve?

<p>Energy use contributes 22% of the total NHS carbon footprint (SDU).</p> <p>Consumption of utilities (energy and water) in UHNM buildings costs over £8.5 million pounds, and produces 24,000 tonnes of CO₂ emissions every year. As such, there is significant scope for achieving efficiency savings, which can then be directly reinvested into improved patient care.</p> <p>UHNM understands that there is a close correlation between cost and carbon emissions as these are both directly related to consumption. As such, if the demand for utilities is reduced, significant improvements can be made to both environmental and financial sustainability.</p>	
Objectives	To reduce utility consumption and therefore CO ₂ emissions from the UHNM estate
SDMP Target	<ul style="list-style-type: none"> ▪ To contribute to reducing all greenhouse gas emissions to net zero by 2050, in line with the NHS, public health and social care system and UK Climate Change Act target (2019) ▪ To minimise utility consumption in existing facilities through staff engagement, monitoring of consumption, improved controls and upgrades to heating, lighting, ventilation and insulation ▪ To reduce utility consumption by replacing the least efficient buildings with state of the art highly efficient facilities ▪ To eliminate CO₂ emissions related to energy consumption through renewable generation of electricity and heat
Operational Lead	Charlie Cox, Energy Manager
Responsible Lead	Louise Stockdale, Head of Sustainability and Transformation
Responsible Director	Barry Deacon, Deputy Director of Estates, Facilities and PFI
Responsible Board Member	Lorraine Whitehead, Director of Estates, Facilities and PFI

How can we achieve it?

- The Estates, Facilities and PFI (EFP) division will review all UHNM building stock and develop a Sustainable Building Action Plan. This will identify suitable upgrades to existing buildings and also highlight which buildings need to be replaced in order to achieve net zero carbon. This assessment will be in accordance with the UK Green Building Council *Net Zero Carbon Buildings Framework*⁵ and will be communicated to all key stakeholders;
- The Trust will implement an 'Invest-to-Save' programme in order to improve efficiency. This will involve the investment of capital and revenue resources. A selection of future schemes is listed below; these have been selected on the basis of both the CO₂ emissions savings and the potential to make a return on investment. The list of schemes will evolve as developments across the estate and emerging technology present new opportunities:

⁵ <https://www.ukgbc.org/ukgbc-work/net-zero-carbon-buildings-a-framework-definition/>

- Combined Heat and Power (CHP) plant installation at the County Hospital. The potential for use of biofuel or fuel cell technology will be investigated
 - Continued investment in LED lighting, and smart lighting controls
 - Insulation improvements for buildings and pipework
 - The installation of automatic shutdown software for computers
 - On-site generation with renewable technologies
- The EFP division will regularly assess space utilisation across the estate, and look to dispose of excess buildings (see section 5.4);
 - Whole life cost and carbon emissions will be considered for all capital investments. This includes carbon emissions related to construction of buildings and manufacture of equipment, as well as the cost and carbon related to utility consumption during operation;
 - Building refurbishment projects will be expanded to include improved plant control and Building Management Systems (BMS) enhancements, as well as energy efficiency measures including LED lighting upgrades and window replacements;
 - The Trust will continue to investigate and champion innovative funding mechanisms to allow investment in low and zero carbon technologies across the estate, particularly onsite renewables and energy storage. Funding methods may include community investment, off balance sheet arrangements, and partnerships with local authorities or PFI partners;
 - The Trust will strengthen links and partnerships with PFI partners, local universities, local authorities, third sector organisations and other NHS bodies to enable collaboration on asset utilisation and utility efficiency initiatives;
 - The Trust will look to embrace new and innovative technology to improve utility efficiency and reduce carbon emissions. The Trust recognises that both Keele and Staffordshire Universities have world leading expertise in renewable energy research and development and working collaboratively would enable opportunities to be realised;
 - The procurement of energy supplies will include consideration of green energy tariffs. These will be investigated to determine if they contribute to a reduction in CO₂ emissions. It is recognised that onsite renewable generation should be prioritised over green tariffs for grid energy;
 - Offsetting will be considered for emissions that cannot be eliminated by the measures outlined;

How will we measure it?

- The Trust will develop a sub-metering strategy, to ensure that we are able to monitor energy usage in all key areas and identify further opportunities for energy reduction. This will seek to increase the use of automatic meter reading (AMR) to allow far greater granularity of data;
- As a minimum, utility consumption across all UHNM sites will continue to be monitored through monthly meter readings. These will be used to calculate consumption, cost and carbon emissions using the relevant published conversion factors;
- Performance of completed schemes and initiatives will be verified to ensure that cost savings and CO₂ reductions relative to grid energy are achieved;
- Interrogation of Model Hospital data to benchmark UHNM utility consumption in order to help to identify potential areas of improvement and to test the effectiveness of plans and projects;
- Annual SDAT performance on Asset Management and Utilities.

UN Sustainable Development Goals

The Trust will contribute to Goals 1, 3, 6, 7, 10, 11, 12, 13 and 17 through its Asset Management and Utilities.



Travel and Logistics

What do we want to achieve?

UHNM is a large acute Trust and employs more than 11,000 people, thereby making it a major employer in Staffordshire. In addition, being a regional specialist centre for many services and a major trauma centre, means that the Hospitals are responsible for generating a large number of patient and visitor trips and associated traffic and congestion in the surrounding area.

In England, a total of 5% of all road traffic is associated with the NHS and travel equates to 18% of the NHS carbon footprint (SDU).

Reducing the carbon impact from vehicular travel and thereby making a positive contribution to the local community by reducing air pollution, is now a national priority. This can only be achieved by making active travel more feasible, encouraging bus and rail patronage as well making car based travel more sustainable through facilitating car sharing and provision for electric vehicles.

Providing realistic travel options will reduce demand for car parking spaces and promote health and wellbeing for employees, patients, visitors and the local community.

Objectives	<p>To assist employees, patients and visitors to travel by active and low carbon modes (walking, cycling, public transport and electric vehicles)</p> <p>Providing a realistic choice of access by all modes of transport</p> <p>There is a culture which embraces alternative practises such as agile working and clinical service digitalisation, in order to reduce staff and patient travel</p> <p>Reduce the carbon and air quality impacts of the Trust and supply chain and in doing so make a positive contribution to the local community</p>
SDMP Target	<ul style="list-style-type: none"> ▪ To contribute to reducing all greenhouse gas emissions to net zero by 2050, in line with the NHS, public health and social care system and UK Climate Change Act target (2019) ▪ Travel Plans (2020-2025) will be produced for both sites, by 2020. The SDMP will mirror incorporated travel targets ▪ Once a year (end of year), the Health Outcomes of Travel Tool (HOTT) self-assessment will be carried out as a benchmark and to evaluate the success of changes implemented. A report will be issued to the Board and Trust-wide ▪ Once a year (beginning of year) an Employee Travel Survey will be carried out in order to establish the current employee commuting baseline and thereafter measure shifts in modes of transport
Operational Leads	Louise Stockdale, Head of Sustainability and Transformation
Responsible Lead	UHNM Sustainability Manager
Responsible Director	Barry Deacon, Deputy Director of Estates, Facilities & PFI
Responsible Board Member	Lorraine Whitehead, Director of Estates, Facilities and PFI

How can we achieve it?

- Travel Plans (2020-2025) will be produced and implemented. These will comprise of a broad package of initiatives, specific to our hospital localities, which will assist patients, visitors and

employees to travel via active and low carbon modes (walking, cycling, public transport and electric vehicles) as alternatives to single-occupancy cars when accessing our sites;

- Each year, both sites will be audited in order to establish opportunities to improve walking and cycling infrastructure. For example, this may include the provision of additional secure bicycle storage, lockers, changing and shower facilities, and security lighting;
- The Trust will establish 'User Groups' in order to actively engage with staff, patients and visitors to promote healthy, active travel and gain insight into potential barriers and initiatives that could facilitate and sustain a long term modal shift away from the car;
- The Trust will support a reduction in patient and staff travel through facilitating alternative practises such as agile working for staff and clinical service redesign (in line with the policy direction for integrated care closer to home). This will be facilitated through the Sustainability and Transformation team attendance at the Trust Service Reviews and meeting the divisional teams in order to discuss the case for reducing patient travel and the options to achieve this;
- The Trust will regularly utilise all appropriate methods of communication in order to promote and drive change within UHNM including; 'User Groups', SWITCH Champions, Forums, Intranet, e-Bulletins, notice boards and social media to promote initiatives, projects, campaigns (national and local) and potential funding opportunities;
- The Trust will ensure that employees have access to facilities for video/teleconferencing to reduce business miles between sites and from attending external meetings;
- The Trust will build on the existing, successful partnership with Stoke-on-Trent City Council and Staffordshire County Council in order to successfully deliver the SDMP. This will comprise assisting active and low carbon travel and raising awareness of the associated health benefits to be gained through education and campaigns i.e. Air Aware Campaign Staffordshire;
- The Trust will communicate sustainability commitments to suppliers and engage with them to work in partnership to help reduce road miles from supply activities

How will we measure it?

- The SDU Health Outcomes Travel Tool (HOTT) will be used to evaluate and report the Trust's impact (traffic and associated air quality impacts) from staff travel and the logistics associated with Trust activities and service provision. In time, we will consider that of our supply chain too;
- Employee Travel Survey in order to establish the current employee commuting baseline and thereafter measure shifts in modes of transport. In addition, annual snapshot surveys to detail how employees travel to and from the hospital sites on a single day;
- Measurement and reporting on all travel and transport activities from business mileage and supply chain transport activity to support a reduction in air pollution;
- Measurement of the impact of service redesign on patient travel i.e. mileage saved and associated carbon benefit;
- Number of discounted bus pass purchases;
- Number of Electric Vehicle charging sessions or kWh consumed;
- Number of 'Cycle to Work' Scheme participants;
- Annual SDAT performance on Travel and Logistics.

UN Sustainable Development Goals

The Trust will contribute to Goals 3, 11, 13 and 17 through its Travel and Logistics.



Capital Projects

What do we want to achieve?

Over recent years, the Trust estate has undergone extensive change and upgrade to enable the remodelling and reconfiguration of services, particularly during the merger of UHNS and MSFT. The estate will continue to change, be developed and areas will undergo refurbishment as the Trust services change and backlog maintenance is addressed.

As the changes are made, it is important that sustainability forms part of the design brief for all new buildings and refurbishment works to ensure they are designed and operated as efficiently as possible. This also applies to minimising impacts during demolition and construction. In addition, adapting the estate to the effects of climate change, including flexible design, is essential.

The approach will be to implement resource efficiency (including energy, water and use of natural materials) simultaneous to the delivery of best value through effective space utilisation, consolidation and rationalisation.

Objectives	<p>Sustainability considerations are inherent in decision making when planning a capital project</p> <p>National priorities are inherent in our Estates Strategy. This includes the delivery of best value through effective space utilisation, consolidation, rationalisation (closure and disposal of dilapidated and least efficient properties)</p> <p><i>All new and refurbished estate will:</i></p> <ul style="list-style-type: none"> ▪ Have a significantly lower carbon impact, in their construction, lifetime and in their decommissioning. This will be achieved by relevant building projects achieving the required Building Research Establishment Environmental Assessment Methodology (BREEAM) Healthcare rating ▪ Be designed to facilitate; resilience against climate change and weather extremes, promote sustainable behaviours and be adaptable to support change towards low carbon patient pathways/ sustainable models of care
SDMP Target	<ul style="list-style-type: none"> ▪ To contribute to reducing all greenhouse gas emissions to net zero by 2050, in line with the NHS, public health and social care system and UK Climate Change Act target (2019) ▪ Production of a Sustainability Impact Assessment, by 2020 ▪ Production of a Contractor Briefing Document, by 2021 ▪ Achieve BREEAM rating of 'Excellent' (for new builds) and 'Very Good' (for refurbishments) ▪ A complete at least one major sustainability capital scheme per year
Operational Lead	UHNM Sustainability Manager
Responsible Lead	Ash Chudasama, Deputy Capital Project Director
Responsible Director	Barry Deacon, Deputy Director of Estates, Facilities & PFI
Responsible Board Member	Lorraine Whitehead, Director of Estates, Facilities & PFI

How can we achieve it?

- Formal sustainability requirements will be inherent within project briefs, tender documents and contracts to ensure that the future estate is designed, constructed and operated to have a lower carbon impact. This will include the development of a 'Contractor Briefing Document' which will be issued to all design team members in order to take all potential opportunities in new builds and major refurbishments, as leverage for sustainable benefit;

The format will comprise a series of questions relating to a broad spectrum of sustainable design considerations that are only discounted upon valid reasoning. Considerations will include resource efficiency (energy, water, and materials), accessibility, waste and whole life costing;

- A Sustainability Impact Assessment (SIA) will be produced and integrated into all proposed capital options in order to inform decision making during the shortlisting process. The SIA will explore the combined economic, environmental and social impacts of sustainable development;
- Ensuring capital allocation for energy and water efficiency improvements will be critical when planning new build and refurbishment capital projects (*see 5.2 Asset Management and Utilities*);
- All major building projects will be subject to BREEAM. As a minimum, major refurbishments will be required to achieve a rating of "Very Good" and future new build projects "Excellent";
- Capital projects and major refurbishments will be designed to facilitate resilience against climate change and weather extremes e.g. during design stage using future temperature profiles in modelling to reduce risk of overheating;
- Capital projects and major refurbishments will be designed flexibly to allow evolution of the buildings use through their life;
- Capital projects and major refurbishments will be designed to support change towards low carbon patient pathways/ sustainable models of care e.g. are the services located to minimise travel, do buildings facilitate digitalisation such as telemedicine / remote monitoring?;
- The Trust will consult with Sustainability and Transformation Partnership (STP) for Staffordshire and Stoke-on-Trent (Estates Programme) when designing buildings/ infrastructure to ensure maximum positive impact on the local health system. This will include the delivery of best value through effective space utilisation, consolidation and rationalisation.

How will we measure it?

- Achievement of the required BREEAM ratings for new buildings and refurbishments;
- Monitor changes made against initial Sustainability Impact Assessment;
- Annual SDAT performance on Capital Projects.

UN Sustainable Development Goals

The Trust will contribute to Goals 6, 7, 12, 13 and 17 through its Capital Projects.



Green Space and Biodiversity

What do we want to achieve?

The Trust is committed to protecting and enhancing the natural environment, including the prevention of pollution.

The Trust recognises the value of the natural environment which plays a key role in our wellbeing, improving patient recovery rates and patient experience, particularly within mental health. As a result, the inclusion of green infrastructure across the estate is a vital resource. Green spaces also provide a habitat for wildlife which contributes to Staffordshire's wider biodiversity network.

Managing our green spaces effectively can enrich biodiversity, improve air quality, reduce noise, provide shading during times of extreme heat and also reduce local surface water flooding.

Objectives	<p>The protection and enhancement of natural assets is inherent within the Trust's Estates Strategy and is managed through key linkages between Estates (Grounds and Gardens), Sustainability, Wellbeing and the Arts agenda</p> <p>The Trust maximises access to natural assets for the benefit of people's health and wellbeing and for the prevention of avoidable illness</p>
SDMP Target	<ul style="list-style-type: none"> ▪ To contribute to reducing all greenhouse gas emissions to net zero by 2050, in line with the NHS, public health and social care system and UK Climate Change Act target (2019) ▪ Production of a Board approved Green Space and/or Biodiversity Action Plan / Strategy, by 2021
Operational Lead	UHNM Sustainability Manager
Responsible Lead	Louise Stockdale, Head of Sustainability and Transformation
Responsible Director	Barry Deacon, Deputy Director Estates, Facilities and PFI
Responsible Board Member	Lorraine Whitehead, Director Estates, Facilities and PFI

How can we achieve it?

- The Trust will produce a Board approved Green Space and/or Biodiversity Action Plan / Strategy, by 2021;
- The Trust will adopt innovative design for new buildings and access routes to buildings with embedded green space e.g. green roofs and infrastructure to minimise air pollution and provide adaptation to climate change;
- The Trust will assess the impacts of the provision of our services on local biodiversity to allow the implementation of mitigation actions e.g. dimming or cowl on external lights;
- Where possible, the Trust will provide green and natural areas on the estate even where land is constrained e.g. window boxes and verges;
- The Trust will work with local green space and biodiversity partners such as Staffordshire Wildlife Trusts and the Local Nature Partnership (LNP) in order to enrich biodiversity on the estate in line with local strategic plans. Consideration will be given to the use of volunteers to facilitate delivery.

How will we measure it?

- Changes (increase) in areas of accessible green space and local flora and fauna species;
- Annual SDAT performance on Green Space and Biodiversity.

UN Sustainable Development Goals

The Trust will contribute to Goals 3, 13 and 15 through its Green Space and Biodiversity



Sustainable Use of Resources

What do we want to achieve?

Procurement accounts for almost 60% of the NHS's overall carbon footprint (SDU). The majority is generated by the production, transportation and disposal of pharmaceutical and medical devices/ instruments.

The best financial and environmental option is to avoid producing waste in the first place; thereby saving on both purchasing and disposal costs. Where waste cannot be avoided, the next most environmentally favourable option is reuse, followed by correctly segregating waste to allow for the most financially and environmentally appropriate disposal solution.

UHNM is committed to adopting sustainable waste management practises, such as the waste hierarchy, in order to maximise the practical benefits from products and minimise the amount of waste generated. The Trust also recognises the wider benefits of this, including a reduction in emissions, energy and pollution, conservation of resources and bolstering of the local economy.

Objectives	<p>Presence of high and compliant standards for waste management from the point of generation to the point of disposal</p> <p>In the first instance, work across all departments to minimise the amount of waste produced</p> <p>When waste is produced, increase the amount of waste that is reused, improve waste segregation and give more precedence to recycling</p> <p>There is a culture that challenges the use and selection of single-use items</p> <p>There is a culture that considers the quality of consumables in order to use less</p>
SDMP Target	<ul style="list-style-type: none"> ▪ To contribute to reducing all greenhouse gas emissions to net zero by 2050, in line with the NHS, public health and social care system and UK Climate Change Act target (2019) ▪ Quantified progress over a series of years to: <ul style="list-style-type: none"> ▪ Reduce the procurement of single-use plastic items ▪ Increase the reuse of items that don't have direct patient contact ▪ Correct segregation, with quantified progress over a series of years to: <ul style="list-style-type: none"> ▪ Reduce the proportion of infectious (hazardous) waste ▪ Increase the proportion of non-infectious (non-hazardous) waste ▪ Introduce a recyclable waste stream across all areas of the Trust, by 2025 ▪ Whole life cycle costs and environmental impacts are taken into account during the procurement decision making process, by 2025
Operational Lead	<p>Phill Mountford, Waste Manager UHNM Sustainability Manager Clare Nash, Senior Nurse, Clinical Procurement</p>
Responsible Lead	<p>Louise Stockdale, Head of Sustainability and Transformation</p>
Responsible Director	<p>Barry Deacon, Deputy Director Estates, Facilities and PFI</p>
Responsible Board Member	<p>Lorraine Whitehead, Director Estates, Facilities and PFI</p>

How can we achieve it?

Principals of purchasing

- The Trust will work with Supply Chain Coordination Limited (NHS Supply chain management function) to lever its purchasing power to mandate all suppliers to disclose and improve their approach to sustainable development and carbon management e.g. ISO14001;
- The Trust will ensure that a partnership between Sustainability, Procurement and clinical teams is formed in order to work together to minimise packaging, minimise over-purchasing and unnecessary expiration of unused equipment/goods, thereby prioritising waste prevention;
- The Trust will consider stock management, including the use of Radio-Frequency Identification (RFID) on high-value items;
- The Trust will ensure that when choosing a product, whole-life cycle costs and environmental impacts will be taken into account during the decision-making process;
- The Trust will commit to selecting substitute products over single-use plastic items, providing there is no compromise to patient care, staff safety and the financial case is acceptable;
- The Trust will commit to identifying and selecting more environmentally sound substitute products, if there is no compromise to patient care, staff safety and the financial case is acceptable;

Waste Management

- The Trust will work with all waste management contractors to ensure that the quantity of waste produced, associated cost and various disposal routes are transparently reported each month;
- The Trust will educate staff on the environmental and financial benefits of appropriate waste segregation in order to empower and encourage all employees to take action in their local areas;
- The Trust will aim to maximise the reuse and recycling of resources as a default option;
- Education and awareness raising with clinicians in order to ensure good stock rotation;
- The Trust will investigate partnering with other NHS organisations in order to share resources such as furniture and non-medical equipment in order to increase the amount of reuse;
- The Trust will investigate the feasibility of implementing innovative contracts and alternative technologies for waste disposal. This may involve the use of new technologies and partnering with local organisations e.g. local authority (non-hazardous) waste disposal contracts.

How will we measure it?

- Calculating and reporting the annual progress towards the NHS, public health and social care system and UK Climate Change Act target (2019);
- Monthly waste stream analysis (quantity and cost);
- Monthly analysis (quantity and cost) of expired, unused equipment/goods within the waste stream;
- Number of single-use plastic items substituted;
- Annual SDAT performance on the Sustainable Use of Resources.

UN Sustainable Development Goals

The Trust will contribute to Goals 9, 12, 13 and 17 through its Sustainable Use of Resources.



Priority 2: Action Plan

Priority 2: Build Healthy, Sustainable and Resilient Services and Communities

We bear the responsibility of addressing the impact on our services, as a result of severe weather events such as heat waves, cold snaps and flooding.

We commit to improving the resilience of our services and built environment, ensuring they are fit for the future. We will build a connected, resilient local community that is better prepared for environmental and climatic changes through local level partnerships and collaboration.

Adaptation: building resilience to climate change and adverse events

What do we want to achieve?

Climate change adaptation means responding to the projected and current impacts of climate change and adverse weather events. Adaptation for the health and care system is two-fold:

3. Climate change can negatively impact the physical and mental health and wellbeing of the UK population. The NHS needs to be prepared for different volumes and patterns of demand
4. Climate change could impact the operational delivery of the health and care system. The system infrastructure (e.g. buildings, communications) and supply chain (e.g. fuel, care supplies) need to be prepared for and resilient to weather events and other crises.

The Trust recognises that it is an integral part of the local community, as an employer and as a core public service provider. It has an important role to support the community to thrive, be more sustainable, resilient and healthy in changing times and climates. As such, in delivering an effective adaptation and resilience strategy, it is essential to adopt a cross-sector approach involving local authorities, third sector, communities and other health and social care providers.

Objectives	<p>The Trust understands the risks posed from a changing climate and has a Board approved Adaptation Plan whereby implementation progress is reported within the Annual Report</p> <p>The Trust is a part of a system-wide approach with local planning arrangements for adapting to climate change</p>
SDMP Target	<ul style="list-style-type: none"> ▪ To contribute to reducing all greenhouse gas emissions to net zero by 2050, in line with the NHS, public health and social care system and UK Climate Change Act target (2019) ▪ Production of a Board approved Climate Change Adaption Plan to ensure business continuity in a changing climate, by 2021 ▪ Integration of climate change resilience preparedness and the Major Incident Response and Recovery Plan, by 2021 ▪ The Trust is part of a system-wide, integrated response to climate resilience and adaptation, by 2021
Operational Leads	UHNM Sustainability Manager
Responsible Lead	Louise Stockdale, Head of Sustainability and Transformation
Responsible Director	Barry Deacon, Deputy Director Estates, Facilities and PFI
Responsible Board Member	Lorraine Whitehead, Director Estates, Facilities and PFI

How can we achieve it?

1. Understand the risks of a changing climate and develop appropriate action plans

Extreme weather can represent a threat to the effective delivery of health and care services. In addition, a rapid increase of service users during such events increases pressure on employees dealing with increased workloads and potential employee shortages. As such, the Trust will consult with the 'UK Climate Change Risk Assessment (CCRA)⁶ Evidence Report' in order to:

⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69487/pb13698-climate-risk-assessment.pdf

- Compare and prioritise the risks posed by a changing climate;
- Make decisions on adaptation actions (to inform the development of an Adaptation Plan).

2. Be part of local planning arrangements for adapting to climate change

The UHNM Major Incident Response and Recovery Plan describes the Trust's operational command, control and communication (C3) structures required to manage the effects of a significant or major incident within Staffordshire. This includes flooding and severe weather conditions e.g. excessive rain, snow, wind, ice, extreme cold or heat. A dialog will be developed with the Emergency Preparedness team in order to ensure integration of climate change resilience preparedness and the Major Incident Response and Recovery Plan.

The Trust, other public services and local organisations will work together for a system-wide, integrated response to climate resilience and adaptation. This is likely to involve integrated planning and delivery from colleagues in the NHS, local authorities, Clinical Commissioning Groups and Third sector. As such, the Trust will become part of the locality network, becoming embedded within the Staffordshire Emergency Planning and Business Continuity Plans;

3. UHNM Adaptation Plan

The Trust will develop a (Board approved) Climate Change Adaptation Plan in order to build upon this SDMP and respond to the SDU's strategy '*Under the Weather: Improving health, Wellbeing and Resilience in a Changing Climate*⁷' which requires health and care organisations to put this in place in order to ensure business continuity in a changing climate.

The Adaptation Plan will provide the Trust with a way to identify, manage and adapt services according to the potential impacts of climate change in the local operating area, thereby increasing the resilience of people, services and communities to a changing climate. An important component of this is ensuring the health and care system infrastructure (buildings, emergency services, vehicles and the supply chain for fuel, food and key products) is prepared for, and resilient to, severe weather events and other disruptions. Additionally, as many health and care services are increasingly being delivered in people's own homes, there is a growing need to ensure that domestic as well as institutional settings are adapted, resilient and accessible.

How will we measure it?

- Calculating and reporting the annual progress towards the NHS, public health and social care system and UK Climate Change Act target (2019);
- Reporting progress on implementing the Adaptation Plan, within the UHNM Annual Report;
- Annual SDAT performance on Adaptation.

UN Sustainable Development Goals

The Trust will contribute to Goals 3, 12, 13 and 17 through Adaptation.



⁷ <https://www.sustainabilitywestmidlands.org.uk/resources/under-the-weather-improving-health-wellbeing-and-resilience-in-a-changing-climate/>

Priority 3: Action Plan

Priority 3: Embed Sustainable Clinical and Care Models

The NHS, public health and social care system recognises that the current system is not sustainable without radical transformation. It highlights that environmental and social sustainability can be addressed alongside economic sustainability challenges, due to the principles of sustainability being aligned with the policy direction for integrated care closer to home. This provides us with an opportunity to view services differently and enable a more sustainable system.

We commit to transforming the way we deliver care in line with this direction, thereby facing two overriding challenges:

1. To drive operational improvement with financial pressures will depend on more efficient operations to ensure that our services deliver the best quality of care within the resources available
2. To secure long-term sustainable health services for patients by making fundamental changes to models of care

Embed Sustainable Clinical and Care Models

What do we want to achieve?

UHNM is committed to working in different ways in order to deliver more sustainable health and care. Evidence has shown that the need for acute and specialist interventions can be minimised when there is a system-wide focus on living well and supporting people to manage their lives in a positive way.

In line with the NHS Long Term Plan, this will involve developing an integrated care system (ICS) in order to achieve system-wide efficiency, quality, health outcomes and equity. This requires a move towards expertise in primary and community-based health and social care in order to develop services and systems that are designed around patients and their physical, psychological and social needs.

Objectives	<p>UHNM provides quality services and systems that include sustainability as a fundamental principle. This means minimising environmental impacts, enhancing health and building resilience with individuals and their communities</p> <p>UHNM is a health promoting Trust that develops a physical environment, corporate identity and culture that embraces health promotion and reducing health inequalities. The Trust will empower individuals to make lasting change for the benefit of the Trust, patients and local community</p> <p>UHNM and other key stakeholder leaders work in partnership (via the ICS) with a focus on prevention, health improvement, enabling independence to build stronger communities</p>
SDMP Target	<p>By 2025:</p> <ul style="list-style-type: none"> ▪ Service transformations deliver improved health outcomes coupled with social and environmental benefits ▪ Sustainability is a core and measurable dimension that underpins quality ▪ Funding solutions and contracts that incentivise more sustainable models of care and enable the reconfiguration of services away from acute settings are jointly developed by commissioners and providers
Operational Leads	David Perry, Head of Transformation Louise Stockdale, Head of Sustainability and Transformation
Responsible Lead	Louise Stockdale, Head of Sustainability and Transformation
Responsible Director	Barry Deacon, Deputy Director Estates, Facilities and PFI
Responsible Board Member	Lorraine Whitehead, Director Estates, Facilities and PFI

How can we achieve it?

- The Trust Service Reviews will be attended by the Sustainability and Transformation team in order to drive more sustainable options for reconfiguring services e.g. locality, digitalisation;
- A Sustainability Impact Assessment (SIA) will be produced and integrated into project initiation documents (PIDs) and business cases in order to inform decision making. The SIA will explore the combined economic, environmental and social impacts of sustainable development;
- The Sustainability and Transformation team will attend and drive the strategic agenda for the Estates Program of the 'Together We're Better' Sustainability and Transformation Partnership

(STP) for Staffordshire and Stoke-on-Trent (from 2020 this will become an ICS). This will ensure that estates planning is a fundamental requirement of delivering integrated care and sustainability;

- As part of the involvement with the ICS Estates Program, the Sustainability and Transformation team will use existing contacts and networks, as well as create new ones, between UHNM and different organisations (both health and non-health e.g. third sector), in order to facilitate integration / a whole systems approach and therefore help improve patient experience, practitioner knowledge and reduce inequalities in outcomes;
- The Trust will seek opportunities to develop mechanisms that facilitate more sustainable models of care, aimed at improving both health and sustainability. These may include:
 - Reducing fuel poverty e.g. *Saving Lives with Solar* referrals (refer to case study on Page 14)
 - Encouraging sustainable, active travel e.g. exercise on prescription
 - Improving local air quality e.g. switching patients with asthma from a metered-dose inhaler (MDI) to dry powder inhalers (DPIs)
- The Trust will ensure that sustainable models of care and reconfiguration of services away from acute and specialist intervention settings will be developed through a partnership between colleagues in the NHS, Clinical Commissioning Groups, Public Health, Social Care, third sector service providers, and other key stakeholders.

This will be primarily achieved through designing improvements to the UHNM ‘*Saving Lives with Solar*’ scheme, whereby UHNM clinicians refer patients to third sector ‘Beat the Cold’ in order to prevent readmissions of vulnerable patients whose health conditions are at risk of being exacerbated by living in a cold and damp home. Improvements will ensure that referrals into the scheme become embedded and are deemed ‘normal practise’. By increasing its resilience, the scheme will be successful in ensuring that both the patients and Trust benefit from the health improvement associated with mitigating fuel poverty.

- The Trust will ensure that it takes action to reduce inequalities, through working in partnership with more than one sector. Since many of the causes of ill health lie in social and economic conditions, actions to improve health must be taken collaboratively by a range of agencies that have the potential to affect social and economic conditions.

The Marmot Review showed that if the conditions in which people are born, grow, live, work and age are favourable and distributed more equitably, people would have more control over their lives in ways that will influence their health. Clinicians can tackle the social determinants of health by helping to create the conditions in which their patients can have control of their own lives.

As above, this will be primarily achieved through designing improvements to the UHNM ‘*Saving Lives with Solar*’ scheme. In addition, other project opportunities will be sought.

How will we measure it?

- Annual SDAT performance on Sustainable Care Models
- Monitor changes made against initial Sustainability Impact Assessment.

UN Sustainable Development Goals

The Trust will contribute to Goals 3, 10, 11, 16 and 17 through embedding sustainable clinical and care models.



APPENDIX B

Key drivers for change – Including legislative, policy and evidence

Driver	Description	Link to Additional Information	Type of Driver
<p>Civil Contingencies Act (2004)</p>	<p>The Civil Contingencies Act 2004 requires certain organisations to prepare for adverse events/ incidents.</p> <p>Our changing climate is a major driver of many of the emergencies and extreme events that the UK must be better-prepared for. Heat-waves, flooding and cold weather can disrupt the operation of the health and care system and have direct impacts on health. These situations are recognised as relevant to the Act, alongside major incident situations.</p>	<p>https://www.sduhealth.org.uk/policy-strategy/legal-policy-framework/civil-contingencies-act.aspx</p>	<p>Statutory</p>
<p>Climate Change Act (2008)</p>	<p>The Climate Change Act is a long term legally binding framework to reduce carbon emissions, mitigate and adapt to climate change. In 2019, based on recommendations from parliament's Committee on Climate Change, the UK government accelerated this target by committing to reduce all greenhouse gas emissions to net zero by 2050</p>	<p>http://www.legislation.gov.uk/ukpga/2008/27/contents</p>	<p>Statutory</p>
<p>Public Services (Social Value) Act (2012)</p>	<p>The Public Services (Social Value) Act 2012, places a requirement on commissioners to consider economic, social and environmental benefits, taking a value for money approach - not lowest cost - to assessing contracts, when buying goods and services.</p>	<p>http://www.legislation.gov.uk/ukpga/2012/3/enacted</p>	<p>Statutory</p>
<p>Sustainable Communities Act (2007)</p>	<p>The principal aim of this Act is to promote the sustainability of local communities by encouraging the improvement of the economic, social and environmental well-being of the area. The Sustainable Communities Act 2007 (SCA) provides an opportunity for local people to ask central government via local government to remove legislative or other barriers that prevent them from improving the economic, social and environmental well-being of their area.</p>	<p>http://www.legislation.gov.uk/ukpga/2007/23/contents</p>	<p>Statutory</p>

Local Government Act (2000)	Local government has a responsibility for the economic, social and environmental 'wellbeing' of their area and contribute to the achievement of sustainable development in the United Kingdom.	http://www.legislation.gov.uk/ukpga/1972/70	Statutory
Health Sector Report on Adaptation for 2015	Under the Adaptation Reporting Power provisions outlined in the Climate Change Act (2008) the government have nominated the Sustainable Development Unit with support from NHS England and Public Health England as the reporting authority for the health sector.	https://www.sduhealth.org.uk/areas-of-focus/community-resilience/adaptation-report.aspx	Statutory
EU Directive on Public Procurement	<p>A new EU Directive on public procurement was agreed in 2013 setting new rules for public bodies when purchasing goods and services, including clinical services.</p> <p>It includes a number of positive drivers for sustainable development. For example, a provision that a greater emphasis is put on considering environmental and social issues in public procurement.</p>	https://ec.europa.eu/growth/single-market/public-procurement_en	Statutory
NHS Standard Contract (Service Condition 18)	<p>The NHS Standard Contract issued by commissioners requires that Providers:</p> <ul style="list-style-type: none"> • Maintain and deliver an SDMP and provide an annual summary on progress; • Quantify environmental impacts and publish in its Annual Report quantitative progress data (emissions reduction) • Give due regard to the impact of expenditure on the community, over and above the direct purchase of goods and services, as envisaged by the Public Services (Social Value) Act 2012. • The SDMP must set out detailed plans and actions in pursuit of NHS Long Term Plan commitments 	https://www.england.nhs.uk/wp-content/uploads/2019/12/2-full-length-particulars-20-21.pdf https://www.england.nhs.uk/wp-content/uploads/2019/12/3-full-length-service-conditions-20-21.pdf https://www.england.nhs.uk/wp-content/uploads/2019/12/4-full-length-general-conditions-20-21.pdf	Statutory
Principle 6 - NHS	All NHS bodies and private and third sector providers supplying NHS services	https://www.gov.uk/government/publications/the-nhs-constitution-	Policy

Constitution	<p>are required by law to take account of this constitution in their decisions and actions.</p> <p>Principle 6 states: <i>“The NHS is committed to providing best value for taxpayers’ money and the most effective, fair and sustainable use of finite resources.”</i></p>	for-england/the-nhs-constitution-for-england	
NHS Long Term Plan	<p>In January 2019, the NHS published its Long Term Plan. This 10-year plan refers to the NHS as an 'anchor institution', which contributes to the local economy, society and environment. Building on this theme, the plan includes the following commitments towards sustainability:</p> <ul style="list-style-type: none"> • Adhering to the UK government Climate Change Act ; • A shift to lower carbon inhalers and transforming anaesthetic practices; • Improving air quality by cutting business mileage • Phasing out primary heating from coal and oil fuel on NHS estates; • Best practice efficiency standards and adoption of new innovations to reduce waste, water and carbon; • Reducing single-use plastics; • Preventing illnesses 	https://www.longtermplan.nhs.uk/	Policy
Government Buying Standards	<p>The Government Buying Standards (GBS) are easy-to-use product specifications that enable public authorities to develop tenders which procure sustainably.</p>	http://sd.defra.gov.uk/advice/public/buying/	Policy
HM Treasury Sustainability Reporting Framework	<p>As part of its sustainable development strategy the Government mandates companies and public bodies to disclose their sustainability and environmental performance via their annual reports and accounts.</p>	www.sduhealth.org.uk/delivery/measurement/reporting.aspx https://www.gov.uk/government/publications/public-sector-annual-reports-sustainability-reporting-guidance	Policy
National Adaptation Programme	<p>The National Adaptation Programme (NAP) sets out what government, businesses and society are doing to become more climate ready.</p> <p>Healthy and resilient communities is a specific chapter and it contains an</p>	https://www.gov.uk/government/publications/adapting-to-climate-change-national-adaptation-programme	Policy

	implementation plan of agreed actions by the health and care system.		
Public Health Outcome Framework	<p>The Outcome Framework for public health at national and local levels consists of five domains.</p> <p>The Health Protection and Resilience domain includes the indicator: Public sector organisations with a board-approved Sustainable Development Management Plan (SDMP).</p>	<p>http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_132559.pdf</p> <p>http://www.phoutcomes.info/public-health-outcomes-framework/domain/4</p>	Policy
NHS Carbon Reduction Strategy (CRS) 2009	<p>The Carbon Reduction Strategy set an ambition for the NHS to help drive change towards a low carbon society.</p> <p>Published in response to the Climate Change Act it set an interim NHS target of a 10% reduction in CO₂e emissions by 2015 (originally based on a 2007 baseline and given current progress, from a 2012 baseline)</p>	<p>www.sduhealth.org.uk/policy-strategy/engagement-resources/nhs-carbon-reduction-strategy-2009.aspx</p>	Policy
National Policy and Planning Framework	<p>The Framework sets out the government's planning policies for England. The document states that "<i>the purpose of the planning system is to contribute to the achievement of sustainable development</i>" (pg. 2).</p> <p>The national policy and planning framework has a specific section on Promoting Healthy Communities.</p>	<p>www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf</p>	Policy
Health 2020 WHO	<p>Health 2020 is the European health policy framework for the World Health Organization (WHO) European region. It aims to support action across government and society to:</p> <p><i>"significantly improve the health and well-being of populations, reduce health inequalities, strengthen public health and ensure people-centred health systems that are universal, equitable, sustainable and of high quality"</i>.</p>	<p>http://www.euro.who.int/en/health-topics/health-policy/health-2020-the-european-policy-for-health-and-well-being</p>	Policy
The Sustainable Development Goals	<p>The Sustainable Development Goals (SDGs) were adopted by all United Nations Member States in 2015 in order to achieve the following by 2030:</p>	<p>https://sustainabledevelopment.un.org/sdgs</p>	Policy

(SDGs)	<ul style="list-style-type: none"> • GOAL 1: No Poverty • GOAL 2: Zero Hunger • GOAL 3: Good Health and Well-being • GOAL 4: Quality Education. • GOAL 5: Gender Equality • GOAL 6: Clean Water and Sanitation • GOAL 7: Affordable and Clean Energy • GOAL 8: Decent Work and Economic Growth • GOAL 9: Industry, Innovation and Infrastructure • GOAL 10: Reduced Inequality • GOAL 11: Sustainable Cities and Communities • GOAL 12: Responsible Consumption and Production • GOAL 13: Climate Action • GOAL 14: Life Below Water • GOAL 15: Life on Land • GOAL 16: Peace and Justice Strong Institutions • GOAL 17: Partnerships to achieve the Goal <p>The core principle of the SDGs is a call for action by all countries, in a global partnership.</p>		
Challenging financial environment	<p>The pressure on public service budgets since the global economic crisis in 2007 has been well documented. The challenging financial environment continues to act as a key driver for examining and transforming how health and care services are delivered.</p> <p>Platforms for these discussions, such as the NHS ‘Call to Action’ or the Local Government Association’s ‘Rewiring Public Services’ campaign are an opportunity to engage in shaping the future.</p>	<p>http://www.england.nhs.uk/2013/07/11/call-to-action/</p> <p>www.local.gov.uk/campaigns/</p>	Evidence
Rising costs	<p>The paper ‘Spending on health and social care over the next 50 years. Why think long term?’ by John Appleby of the King’s Fund provides a useful examination of the projections and drivers of rising costs in the health and social care sector.</p>	<p>http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/Spending%20on%20health%20...%2050%20years%20low%20res%20for%20web.pdf</p>	Evidence

Economics of Climate Change - Stern Review 2006	<p>This review assessed a wide range of evidence on the impacts of climate change and on the economic costs, and used a number of different techniques to assess costs and risks.</p> <p>From all of these perspectives, the evidence gathered by the Review leads to a simple conclusion: the benefits of strong and early action far outweigh the economic costs of not acting.</p>	http://webarchive.nationalarchives.gov.uk/20130129110402/http://www.hm-treasury.gov.uk/stern_review_report.htm	Evidence
Defra Economics of Climate Resilience Report 2013	<p>The reports assess the UK's capacity to adapt to the future challenges of climate change and the degree to which adaptation action is already being taken or planned. The reports conclude that action needs to be taken urgently to ensure the UK is ready for the climate change challenge ahead.</p>	http://randd.defra.gov.uk/Default.aspx?Module=More&Location=Non&ProjectID=18016	Evidence
NHS Marginal Abatement Cost Curves	<p>Marginal Abatement Cost Curves developed by the NHS in England have identified over £180 million of health system savings through initiatives to reduce carbon emissions. For example, replacing 5% of NHS business miles with teleconferencing would save almost £14 million each year.</p>	www.sduhealth.org.uk/delivery/measure/finance.aspx	Evidence
Intergovernmental Panel on Climate Change (IPCC)	<p>One of the main IPCC activities is the preparation of comprehensive Assessment Reports about the state of scientific, technical and socio-economic knowledge on climate change, its causes, potential impacts and response strategies.</p>	http://www.ipcc.ch/report/ar5/#.UplgKxLeiA	Evidence
HPA Health Effects of Climate Change 2012	<p>This report provides scientific evidence of the wider risks to public health from climate change in the UK.</p> <p>It gives those in the health and social care sectors the information they need to make informed decisions about the pressures of climate change on public health.</p>	http://www.hpa.org.uk/hecc2012	Evidence

Health Co-benefits Evidence	<p>There is a growing body of evidence that actions to reduce carbon emissions and adapt to climate change can simultaneously improve health and wellbeing.</p>	<p>www.thelancet.com/climate-change</p> <p>http://www.who.int/hia/examples/trspt_comms/hge_transport_lowres_durban_30_11_2011.pdf</p> <p>http://dx.doi.org/10.1136/bmj.e1018</p>	Evidence
NICE Guidance NG70: Air pollution: outdoor air quality and health	<p>This guidance aims to reduce road-traffic related air pollution and so prevent a range of health conditions and deaths.</p> <p>Implementation of NICE Guidance is vital for the Trust to meet the Care Quality Commission (CQC) essential standards of quality and safety and other external assessments. As such, the Trust requires assessment and implementation of appropriate recommendations with an annual update.</p>	<p>https://www.nice.org.uk/guidance/ng70</p>	Evidence
Marmot Review 2010 - 'Fair Society Healthy Lives'	<p>Professor Sir Michael Marmot chaired an independent review to propose the most effective strategies for reducing health inequalities in England from 2010. The report concluded that reducing health inequalities would require action on six policy objectives. The objectives align with, and mutually support, the objectives of the SDMP.</p>	<p>http://www.instituteofhealthequity.org/projects/fair-society-healthy-lives-the-marmot-review</p>	Evidence
WHO Europe - Social Determinants and the Health Divide	<p>The review has collected new evidence on the magnitude and pathways related to health inequalities in the European Region and the most effective interventions and policy approaches to address them. It illustrates that what makes societies flourish and sustainable also makes people healthy.</p>	<p>http://www.euro.who.int/_data/assets/pdf_file/0006/215196/Review-of-social-determinants-and-the-health-divide-in-the-WHO-European-Region-final-report-Eng.pdf</p>	Evidence
Health and Social Care Carbon footprint	<p>The world's first combined health, public health and social care carbon footprint for a national health system estimates the health and care system carbon footprint to be 32 million tonnes of carbon dioxide equivalent (MtCO₂e). This represents 40% of public sector emissions in England.</p>	<p>www.sduhealth.org.uk/report</p>	Evidence

APPENDIX C

Example of reporting matrix of SDMP key performance indicators⁸

Theme	Indicator	Metric	2015/16	2016/17	2017/18	2018/19	Trend
Carbon Emissions	Scope 1 (gas, oil, fleet, anaesthetic gas)	(tCO2e)	13,820	13,132	13,907	13,724	
	Scope 2 (electricity)	(tCO2e)	21,236	20,067	17,515	14,162	
	Scope 3 (NHS supply chain, waste, travel, etc.)	(tCO2e)	70,665	79,694	81,207	86,311	
	Total Carbon (Scopes 1, 2 & 3)	(tCO2e)	105,721	112,893	112,628	114,197	
Energy	Electricity consumption	kWh	36,937,547	38,828,428	39,295,816	40,147,116	
	Gas consumption	kWh	42,548,780	42,115,642	46,759,825	45,390,730	
	Oil consumption	kWh	865,098	543,381	892,324	765,375	
Onsite Renewable Energy Generation	Biomass	kWh	1,548,610	2,722,499	463,088	0	
	Solar	kWh	23,813	39,717	36,057	44,396	
Water	Water	m ³	261,961	241,944	351,561	389,225	
Waste	Recovery	tonnes	196	227	1,972	1,779	
	Landfill	tonnes	1,231	1,487	191	204	
	Recycling	tonnes	1,561	1,266	518	386	
Travel	Grey Fleet	miles	1,072,470	532,744	409,137	461,973	
	NBT Fleet	miles	-	-	-	540,792	N/A
	Electric Fleet	miles		14,473	18,094	16,163	
Anaesthetic Gas	Desflurane	litres	338	216	159	131	
	Isoflurane	litres	53	12	11	8	
	Sevoflurane	litres	214	273	294	279	
	Nitrous oxide	litres	613,800	477,900	432,000	442,800	
	Nitrous oxide with oxygen	litres	10,629,500	10,877,700	10,078,200	10,588,800	

⁸ www.nbt.nhs.uk/sustainablehealthcare