Author: Rider Levett Bucknall Sponsor: Darryn Kerr

Trust Board paper H

Purpose of report:

This paper is for:	Description	Select (X)
Decision	To formally receive a report and approve its recommendations OR a particular course of action	x
Discussion	To discuss, in depth, a report noting its implications without formally approving a recommendation or action	
Assurance	To assure the Board that systems and processes are in place, or to advise a gap along with treatment plan	X
Noting	For noting without the need for discussion	

Previous consideration:

Meeting	Date	Please clarify the purpose of the paper to that meeting using the categories above
Reconfiguration Programme Committee	17/12/2021	Noting
Executive Board	7/12/2021	Discussion with opportunity to feedback
Trust Board Committee		
Trust Board	6/1/2022	For discussion and approval for submission to the ICS

Context

The NHS has a well socialised ambition to be net zero ambition. Each trust and integrated care system must have a Green Plan which sets out their aims, objectives, and delivery plans for carbon reduction. In each case, this must be signed off by the Trust Board. Each ICS also needs to develop its own Green Plan, based on the strategies of its member organisations. The layout and format of the UHL Green Plan is pre-determined.

This Plan must be agreed by the Trust Board by the 14th January, for submission to the ICS to create the system Green Plan by the 31st March.

This Green Plan establishes the Trust's sustainable vision, our targets and the actions by which to achieve this vision. The Trust considers sustainability to be a key issue facing the future, for the Trust, Leicester, Leicestershire and Rutland (LLR), the UK and beyond.

The Green Plan is a Governing Body approved, live strategy document outlining the UHL's aims, objectives and delivery plans for sustainable development. This Green Plan represents UHL's three-year strategy and integrates our alignment with the 2021/22 NHS Standard Contract, 'Delivering a Net Zero Health Service' and the 2021/22 NHS Planning Guidance. Not only is this the right thing to do socially, the movement to Net Zero Carbon is a mandatory requirement. The plan targets three clear outcomes:

- Supporting the NHS-wide ambition to become the world's first healthcare system to reach net zero carbon emissions

- Prioritising interventions which simultaneously improve patient care and community wellbeing while tackling climate change and broader sustainability issues
- Planning and making prudent capital investments while increasing efficiencies.

Developing and implementing a Trust approved and resourced Green Plan will also help UHL to deliver the NHS Long Term Plan deliverables.

Questions

1. What are the key elements of the Green Pan that need consideration?
2. What are the implications for UHL?
3. What was the discussion at ESB?

Conclusion

1. What are the key elements of the Green Pan that need consideration?

1.1 The Green Plan provides an organisation wide strategy that includes a high-level vision and strategic objectives, as well as detailed actions that will deliver this vision. It serves as the central document for the Trust's sustainability agenda and provides the rationale for sustainability at the Trust, objectives the Trust has set for itself and the means by which they will be met.

1.2 To deliver the Green Plan the Trust will

- embed sustainability within our Trust whilst working together with our partners across the Leicester, Leicestershire and Rutland (LLR) region and the NHS to improve sustainability.
- collaborate with our partners to help meet our own internal, regional and national level objectives.
- be a truly sustainable organisation through the engagement and involvement of all our staff in playing their part in delivering the objectives of the Green Plan.

1.3 Our progress and actions are set out in the following areas of focus of this Green Plan:

- Workforce and system leadership (page 18)
    - Engaging and developing workforce and system partners in delivering sustainability goals.
- Sustainable models of care (page 21)
    - Embedding sustainability principles into clinical services including care closer to home, lower carbon interventions and improving outcomes.
- Digital transformation (page 27)
    - Focusing on harnessing systems to streamline delivery and supporting functions whilst reducing carbon emissions.
- Sustainable Travel and transport (page 29)
    - Exploring actions to reduce carbon emissions associated with travel, increasing active travel and public transport.

- Estates and facilities sustainability (page 32)
    - Reducing carbon emissions from estate buildings and infrastructure; decarbonisation of heat, improving efficiency and circular economy principles.
- Medicines (page 42)
    - Opportunities to reduce carbon emissions from prescription and usage of medicines, particularly inhalers and anaesthetic gases.
- Supply chain and procurement (page 45)
    - Exploring options to use purchasing decisions to reduce carbon embedded in supply chains.
- Food and nutrition (page 49)
    - Considering carbon reductions, reducing food wastage and providing healthier, locally sourced meals.
- Adaptation to Climate Change (page 51)
    - Plans to mitigate the risks of climate change and severe weather conditions on business and functions.
- Carbon Footprint (page 54)
    - Carbon footprint of UHL from 2017 – 2021.
- Summary Review of progress 2013 to 2021 (page 63)
- Looking beyond the Green Plan - Challenges and opportunities (page 65)

2. What are the implications for UHL?

The commitments to deliver the Green Plan will require significant resource for UHL: both in terms of staff resource, and financial impactions (some recommendations will have a negative financial impact).

In the long term, this will provide mitigation of carbon related risk (financial penalties of not hitting the Net Zero targets.)

This plan is not yet costed. The next step, once approved, will be to undertake a full resourcing assessment to determine the full financial impact.

3. What was the discussion at ESB?

The specific question was asked at ESB about who had been involved in the development of this Green Plan. The response is embedded into the document, but for clarity, is as follows:

The Green Plan is a high level strategy to lay out the intention for the next three years, aligning with wider NHS sustainability ambitions. Within each area of focus, further works will be undertaken to implement the sustainability improvements which will include further engagement. UHL's Green Plan sits within the wider setting of local, sub-regional, regional and national action to progress sustainability. UHL are working closely at regional level to develop sustainability plans, engaging with the ICS and wider stakeholders.

Engagement to date has been with leads for each focus area, to ensure alignment with existing strategies and commitments. For details of engagement, please see below table. As part of the Green Plan next steps, a communications strategy is required following sign off on the Green Plan contents. This comms plan should consider wider engagement with UHL, and should include a shorter, more easily digestible version of the Green Plan which can then be shared externally. The current Green Plan provides a level of detail which is only required for internal use.

To allow the Green Plan to be implemented successfully, engagement is essential to empower UHL members to deliver sustainable change.

Green Plan Area	***Leadership***	***Existing structure***	***Stakeholders Engaged***	***Actions for the future (engagement & development)***
Vision: Delivering Net Zero UHL	*Board level lead*	*Director of Estates and Facilities*	*As sections below:*	*As sections below:*
Vision: Sustainability	*Head of Sustainability*	*New appointment to be made*	*E&F and HR Teams*	*Appointment required*
Workforce and Leadership	*Finance Human Resources Procurement Communications Corporate Risk Manager QSHE Manager*	*Existing roles split across areas per other sections*	*Gurprit Supra, Trish Francis, Pam Leverton, Julie McCarthy, Wayne Lloyd, Maria O'Brien, Margaret Poole, Leigh Gates, Elaine Neal, Pete Rogers, Joanne Tyler-Fantom*	*New appointments and definition of roles and responsibilities to be agreed as part of Green Plan implementation.*
Sustainable Models of Care	*Applies broadly across UHL and internal and external stakeholders.*	*SME leaders in the following areas: Strategy Digital Clinical Commissioning Group Reconfiguration and wider medical and nursing teams.*	*Rachna Vyas, Simon Pizzie, Nicky Topham, Debra Green – Tony Roost, Jay Mangat, Judy Gilmore, David Streets, Julia Trinder-Oxley, Duncan Macdonald, Anna Delf, Lewis Cade, Anna Murphy, Larry Murphy, Lisa Davies (Charity Director)*	*Identify priority areas for investigation to support; virtual appointments, care in the community or alternative treatment strategies*
Digital Transformation	*UHL Digitisation Strategy*	*IM&T Programme Manager*	*Larry Murphy, Chris Heath, Wayne Lloyd, Martin Owen*	*Need to define engagement for Green Plan integration with digital strategy*
	Estates Digital lead	*New appointment*		
	Clinical lead	*New appointment*		
	Wider stakeholders			
Travel and Transport	*TAP Delivery Group*	*Travelwise Manager*	*Ruth Ward, Ian Murdey, Steven Blower, Pete Rogers*	*Contingent on sign off of Travel Action Plan Phase 4.*
	NHS Leased fleet	*Project Manager*		
	Owned vehicles	*Facilities Manager*		
	Logistic	*Logistics Manager*		
	HR Systems and Payroll – Operations and Projects'	*Staff Benefits Officer*		
Estates and Facilities	*Energy and Sustainability Group/Environmental Champions Group*	*Director of Estates and Facilities*	*Darryn Kerr, Mannix Martin, Mark Peat, Martin Owen, Justin Hammond, Mark Evans, Andy Martin, Peter Pierce, Steve King, BDP, Turner and Townsend, Karen James, Lisa Davies, Nicky Topham*	*Continued engagement to ensure alignment of Estates Strategy, Green Plan and Energy/Infrastructure Strategies*
	Reconfiguration Programme Committee	*Head of UHL Reconfiguration PMO*		
	Capital Projects	*Capital Project Manager*		
	ERIC reporting, Carbon Compliance, SDMP drafting, Asset and Utility decarbonisation, Energy	*Senior Specialist Engineer*		

	Management			
	UHL Waste Management Committee	*Director of Estates and Facilities*		
Medicines	*Pharmacy Intensive care, Theatres, Anaesthesia, Pain and Sleep (ITAPS_ Research Group*	*Deputy Chief Pharmacist – Sustainability Interest Group*	*Duncan Macdonald, Julia Trinder-Oxley, Anna Murphy, Anna Delf, Lewis Cade, Akeeban Maheswaran*	*NZC strategy for anaesthetic use and research into alternative medicines with full engagement required*
Supply chain and procurement	*Procurement and supply chain*	*Head of Procurement & Supplies*	*David Streets/Tony Roost*	*Linkage with wider ICS stakeholder to help leverage green purchasing power*
Food and Nutrition	*Retail and patient catering*	*Production and Development Chef and Facilities Manager Procurement*	*David Streets, Tony Roost, Marion Cockeram, Nicholas Lee, Peter Hartshorn, Steven Blower*	*Alignment with health and well-being strategy and Net Zero strategy. Support from Sustainability lead*
Adaptation	*Climate Change Committee tbc*	*Emergency Planning Team /Estates and Facilities tbc*	*Darryn Kerr, Mannix Martin, Mark Peat, Martin Owen, Mike Blair, Ben Collins, Muhammed Patel, Glyn Lambley, Justin Hammond, Elaine Neal, Webb Taff, Richard Manton, Larry Murphy*	*Ownership to be agreed.*

No further comments have been received from ESB. This document is therefore now circulated as FINAL.

Input Sought

The Trust Board is requested to**:**

1. APPROVE this final version of the Green Plan.

For Reference:

This report relates to the following UHL quality and supporting priorities:

Equality Impact As

1. ***Quality priorities***

Safe, surgery and procedures	[Yes]
Improved Cancer pathways	[Yes]
Streamlined emergency care	[Yes]
Better care pathways	[Yes]
Ward accreditation	[Yes]

2. ***Supporting priorities:***

People strategy implementation	[Yes]
Investment in sustainable Estate and reconfiguration	[Yes]
e-Hospital	[Yes]
Embedded research, training and education	[Yes]

Embed innovation in recovery and renewal [Yes]
Sustainable finances [Yes]

3. **Assessment and Patient and Public Involvement considerations:**

- What was the outcome of your Equality Impact Assessment (EIA)? N/A

- Briefly describe the Patient and Public Involvement (PPI) activities undertaken in relation to this report, or confirm that none were required. Part of individual projects.

- How did the outcome of the EIA influence your Patient and Public Involvement? Part of individual projects.

- If an EIA was not carried out, what was the rationale for this decision? N/A at this stage

4. **Risk and Assurance**
   Risk Reference:

5. **Does this paper reference a risk event?**	**Select (X)**	**Risk Description:**
Strategic: Does this link to a ***Principal Risk*** on the BAF?	X	PR 7 – Reconfiguration of estate
Organisational: Does this link to an ***Operational/Corporate Risk*** on Datix Register		
New Risk identified in paper: What ***type*** and ***description***?		
None		

6. Scheduled date for the **next paper** on this topic: TBC

7. Executive Summaries should not exceed **5 sides** My paper does comply

REPORT 2021

UNIVERSITY HOSPITALS LEICESTER NHS TRUST
GREEN PLAN (DRAFT)

RIDER LEVETT BUCKNALL

RLB Rider Levett Bucknall

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Authorised for issue by:

Signature

Heather Evans, National Head of Sustainability
Rider Levett Bucknall

Signature……...
Mr Darryn Kerr

1. INTRODUCTION

This Green Plan covers University Hospitals of Leicester NHS Trust's (UHL) progress and plans for the next 3 years (January 2022- January 2025) in line with the National Health Service (NHS) Requirement to create a plan aligned to the goal of 'Delivering a Net Zero National Health Service'.

The Green Plan addresses wider sustainability priorities including carbon emissions, single use plastic and air pollution, and site greening for patient and staff well-being.

UHL has the aspiration to become one of the greenest NHS Trusts in the UK. This Green Plan provides an organisation wide strategy that includes a high-level vision and strategic objectives, with detailed actions that will deliver this vision. This Green Plan builds upon the success of the previous Sustainable Development Management Plan (SDMP) which the Green Plan replaces. The Green Plan serves as the central document for the Trust's sustainability agenda and provides the rationale for sustainability at the Trust, objectives the Trust has set for itself and the means by which they will be met.

Foreword CONTENTS TO BE RATIFIED AND APPROVED BY CHIEF EXECUTIVE

Sustainability in Healthcare is changing; we have a responsibility as a provider organisation, and as part of the wider NHS. We are aware of the huge part to play in the delivery of the nation's sustainability goals that the NHS has – not just in terms of carbon reduction, but in leaving a positive impact on both the planet and our local communities.

University Hospitals of Leicester NHS Trust are aware of the impact, influence and opportunity we have as a large healthcare provider. We are reviewing how services are delivered now and in the future, intending to embark on a journey of continuous improvement towards a greener future.

Our aim is to embed sustainability within our Trust whilst working together with our partners across the Leicester, Leicestershire and Rutland (LLR) region and the NHS to improve sustainability. We will collaborate with our partners to help meet our own internal, regional and national level objectives. For the Trust to be a truly sustainable organisation, we need all our staff to play their part in delivering this Green Plan and I strongly encourage all of our colleagues to work together to achieve these aims.

X

Richard Mitchell
Chief Executive Officer

X

John MacDonald
Chair

X

Darryn Kerr
LLR Green Plan SRO

Health Inequalities

The establishment of integrated care systems from April 2021 puts health inequalities and improving the health of the population at the centre of the partnership working across the Integrated Care System (ICS). This is about how we provide our services to ensure that the most vulnerable and disadvantaged receive the care they deserve. But the ICS also has as its purpose to help the NHS support broader social and economic development. The UHL's Green Plan will be a key part of our strategy to do this. Reducing emissions we will reduce respiratory disease, impact on mental health, encourage healthier eating from local suppliers and enabling and encouraging green travel are a few examples of how the Green Panel will lead to a healthier population.

Wellbeing and Welfare

Our people are UHL's greatest asset and our vision is to have the right people with the right skills in the right numbers working in the right place. Only by working together will we create and shape an inclusive culture where our leaders lead with compassion and our people feel they belong, are engaged, and are empowered to take actions that positively impact and influence carbon reduction and broader sustainability initiatives across UHL and the wider health system.

Our people priorities are informed by what we have learnt during the pandemic. We aim to embed more preventative health and wellbeing approaches, tackle inequalities and boost efforts to attract and retain more people.

Reconfiguration and Transformation

For nearly two decades the need to consolidate acute services in Leicester has been widely recognised. The current three acute site configuration of UHL is an accident of history, not design, and is suboptimal in clinical, performance and financial terms. Medical and nursing resources are spread too thinly making services operationally unstable and the duplication and triplication of clinical and support services is inefficient. Many planned, elective and outpatient services currently run alongside emergency services, and as a result, when emergency pressures increase, it is elective patients who suffer delays and last-minute cancellations.

Looking wider, to the whole LLR health and social care economy, the need for clinical service transformation has been widely recognised and is being addressed through the LLR Better Care Together (BCT) programme which was established in January 2014. The BCT programme supports the LLR health and social care commissioners and providers to enact system wide change that will both improve the quality of care from a citizen or patient perspective, while also achieving overall system sustainability. This programme will be progressed by the ICS when it is established in 2022.

The LLR reconfiguration Programme underpins this service transformation, with the move of all acute care to the Leicester Royal Infirmary (LRI) and Glenfield Hospital (GH), whilst enhancing critical care provision across the two sites.

The programme gives a timely opportunity to deliver sustainable buildings, supporting the trusts overall journey to net zero carbon.

About UHL

UHL was created in April 2000 by the merger of the Leicester General Hospital (LGH), Glenfield Hospital (GH) and Leicester Royal Infirmary (LRI). The Trust also has smaller facilities within the community where Renal services are provided.

UHL is one of the largest NHS teaching trusts in England with a budget of over circa £960 million per annum and having more than 16,000 highly skilled staff.

Site	Land (ha)	GIA (m2)
LGH	28.35	73,389
GH	31.01	73,487
LRI	10.02	147,392

This makes UHL one of the biggest and busiest NHS Trusts in the country, serving over 1.2 million residents of Leicester, Leicestershire and Rutland whilst providing increasingly specialist services over a much wider area. The emergency department at Leicester Royal Infirmary is the busiest single unit in the country, serving a population of 1.2 million. UHL provides nationally and internationally renowned specialist treatment and services in cardio-respiratory diseases, ECMO, cancer and renal disorders. UHL reaches over 2 million patients from the rest of the country.

UHL is embarking on a major programme of reconfiguration over the next 5+ years, to transform and improve the way we deliver safe, high quality, patient-centred care, and how we will provide clinical services in the future.

Over time, the reconfiguration of our hospitals has become even more important due to the increase in demand for our services, as well as the fact we have old buildings with services spread too thinly, and in ways that make patient care very challenging. The clinical drive to reconfigure has been exacerbated by the trust's experience of Covid-19; with the need to improve facilities that are pandemic-proofed for the future.

The proposals include reshaping acute and maternity services by moving all acute care to the Leicester Royal Infirmary and Glenfield Hospital. The programme creates a new single site maternity hospital at LRI, a dedicated Children's Hospital at LRI, a new Treatment Centre and wards at GH as well as delivering the supporting ward refurbishments at LRI and GH and supporting infrastructure across all three sites.

On the General Hospital campus, some non-acute services would be retained, including the Diabetes Centre of Excellence and Direct Access GP Imaging. This includes the Diabetes Centre of Excellence, a diagnostic hub with direct access imaging, and we also propose to re-locate the midwifery-led unit at St Mary's in Melton Mowbray to the Leicester General Hospital to help maximise access for women in Leicester, Leicestershire and Rutland.

The LLR Governing Bodies consulted on this propose in Autumn 2020, following the approval of a Pre Consultation Business Case in Summer 2020. This resulted in the approval of a Decision Making Business case in June 2021 which ratified the proposals.

2. DRIVERS FOR CHANGE

NHS Standard Contract	The NHS Standard Contract is mandated by NHS England for use by commissioners for all contracts for healthcare services other than primary care [2] .
2021/22 NHS Planning Guidance	The 2021/22 priorities and operational planning guidance sets the priorities for the year ahead, against a backdrop of the challenge to restore services, meet new care demands and reduce the care back logs that are a direct consequence of the pandemic, whilst supporting staff recovery and taking further steps to address inequalities in access, experience and outcome [3]
Delivering a 'Net Zero' National Health Service	Provides a detailed account of the NHS' modelling and analytics underpinning the latest NHS carbon footprint, trajectories to net zero and the interventions required to achieve that ambition [4].
Greener NHS	The Greener NHS programme will work with our staff, hospitals and our partners. We will build on the great work being done by trusts across the country, sharing ideas on how to reduce the impact on public health and the environment, save money and reach net carbon zero [5].
National Procurement Policy	Sets out information and guidance for contracting authorities on the National Procurement Policy Statement [6].
NHS Single-use plastic pledge	Aim to reduce the use of plastics across our value chain, ranging from SCCL-procured / distributed products and components, plastic materials used for packaging, as well as the broader issue of single-use plastics and the cumulative impacts of these products on the environment [7].
NHS Net Zero Carbon Building Standard (BETA Version)	With the release of the draft NHS NZC Building Standard, UHL are integrating NZC strategies with assumptions made to ensure NZC progresses prior to the standard being released in final form.

3. GREEN PLAN

This Green Plan establishes the Trust's sustainable vision, our targets and the actions by which to achieve this vision. The Trust considers sustainability to be a key issue facing the future, for the Trust, Leicester, Leicestershire and Rutland (LLR), the UK and beyond.

The Green Plan is a Governing Body approved, live strategy document outlining the UHL's aims, objectives and delivery plans for sustainable development. This Green Plan represents UHL's three-year strategy and integrates our alignment with the 2021/22 NHS Standard Contract, 'Delivering a Net Zero Health Service' and the 2021/22 NHS Planning Guidance, targeting three clear outcomes:

- Supporting the NHS-wide ambition to become the world's first healthcare system to reach net zero carbon emissions
- Prioritising interventions which simultaneously improve patient care and community wellbeing while tackling climate change and broader sustainability issues
- Planning and making prudent capital investments while increasing efficiencies.

Developing and implementing a Trust approved and resourced Green Plan will also help UHL to deliver the NHS Long Term Plan deliverables.

Prior to the implementation of this Green Plan, UHL was working towards its previous Sustainability Strategy and action plan which was agreed in the 2017 Sustainable Development Management Plan (SDMP) [8]. This Green Plan builds on our 2017 Sustainable Development Management Plan and sets out our progress and plans for the next three years (January 22- January 25) addressing the overall aim of operating in a sustainable manner. In developing this Green Plan, UHL has reviewed progress since the development of our 2013 and 2017 SDMP's and considered national overall and interim carbon reduction goals for the NHS Carbon Footprint and Carbon Footprint Plus.

We have engaged widely with internal stakeholders and key partner organisations to inform sustainability priorities and identify areas for productive collaboration. We have developed SMART (specific, measurable, achievable, relevant time-bound) actions focused on our plans to reduce carbon emissions in line with targets, and systems and processes to measure and report on progress annually.

Our progress and actions are set out in the following areas of focus of this Green Plan:

- Workforce and system leadership
- Sustainable models of care
- Digital transformation
- Sustainable Travel and transport
- Estates and facilities sustainability
- Medicines
- Supply chain and procurement
- Food and nutrition
- Adaptation to Climate Change
- Carbon Footprint
- Summary Review of progress 2013 to 2021
- Looking beyond the Green Plan - Challenges and opportunities

IMPACT OF THE COVID-19 PANDEMIC

The on-going COVID-19 Pandemic is recognised to have slowed the progress of work towards Net Zero Carbon (NZC) goals in 2020/21. The NHS and UHL has recognised however that the pandemic has had a range of impacts on the delivery of sustainable healthcare and transition to NZC emissions.

UHL will work closely with NHS England and NHS Improvement to set appropriate timelines for our progress and identify ways to respond to both the challenges and opportunities brought about by the pandemic.

The use of virtual patient consultations during the pandemic has been a significant shift both in terms of commuting and patient travel reducing both carbon emissions, air pollution, and traffic congestion. A considerable number of patients have also saved time and money by not attending face to face appointments.

The other side is that considerable numbers of patients have had procedures or tests delayed both to ensure patient safety and focus on the COVID-19 response. Attention has also been diverted from delivery of NZC and other sustainability programmes.

The Trust notes that the Operational Planning and Contracting Guidance has been suspended due to focus on the COVID-19 response, and the Standard Contract agreements are slightly different for 2020/21. [9]

4. ORGANISATIONAL VISION

Our mission statement is to provide 'Caring at its Best' for every patient, every time and our values are central to that purpose; they embody who we are, what we do, and how we behave [9].

As we move towards delivery of the NHS Long Term Plan as an increasingly integrated system, the services we deliver as part of our local and regional networks and partnerships will need to adapt and transform to ensure we are able to deliver caring at its best to every patient, every time and that UHL and the wider system become clinically and financially sustainable.

Our long-term sustainability includes our plans to reconfigure sites and services; this remains a key priority for the Trust, and we will therefore continue to progress through the national assurance process to access capital funding as it becomes available. However, reconfiguration and specifically the concentration of services onto two rather than three acute sites is by no means the only component of our future sustainability.

UHL's Sustainability vision

The Trust's Sustainability vision is to deliver a sustainable green estate, leading on delivery of social value benefits through Trust-wide ownership of the Green Plan including Net Zero Carbon targets.

As such, UHL Priorities for 2020/21 include the investment in sustainable Estate and reconfiguration:

- UHL Reconfiguration Plan brief requires the new buildings to be compliant with the NHS Net Zero Carbon Building Standard (BETA).
- Each scheme will be designed with sustainability as a core deliverable with the highest level of BREEAM performance rating practicable as per performance rating as per the LLR Decision Making Business case.

UHL's **Energy & Infrastructure Strategy** is being developed to identify the existing infrastructure scope in terms of its condition, resilience, fitness for purpose and the adaptability for moving towards a Net Zero Carbon Estate.

The **Estates strategy** is being developed to incorporate sustainability objectives across the Estate. The Trust's vision for Estates & Facilities is to *"become the best Estates & Facilities team in our peer group by achieving top quartile performance in both cost and quality for all of our activities"*

Our operational vision is to provide pro-active engagement from an effective team to make value-driven, evidence-based decisions, maintaining a safe, secure, compliant, resilient, and sustainable estate, that responds robustly to challenges.

Sustainable Models of Care vision (Intelligent Hospital)

UHL's Intelligent Hospital vision is to use 21st Century technology to deliver sustainable 21st Century healthcare that is future-proofed and meets the needs of the communities that we serve within Leicester, Leicestershire and Rutland.

Digital Transformation vision

UHL's Digital and Technology vision is to employ deeply-integrated estates and FM systems that achieve our strategic goal of providing high performing services in relation to our peer group.

The vision is that by 2026, the trust will be recognized as delivering a trusted, secure, class-leading IT service enabling a seamless digital service to our staff, patients and researchers.

People and Workforce vision

UHL's People and Workforce vision is to attract and retain a motivated workforce through technology, training and developing skills whilst maximising progression opportunities to empower our people.

UHL Vision

UHL's organisational vision will be developed as per the below structure:

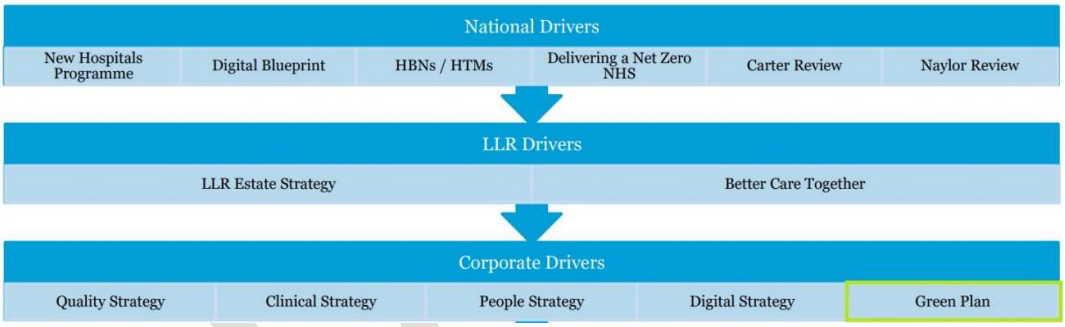


Figure 1 - Draft UHL organisational vision

5. CARBON & NET ZERO

Climate change is recognised as a key health crisis facing the world in the 21st century by a number of organisations including, but not limited to the British Medical Association, the Royal College of Physicians, the Royal College of Nursing and NHSE/I.

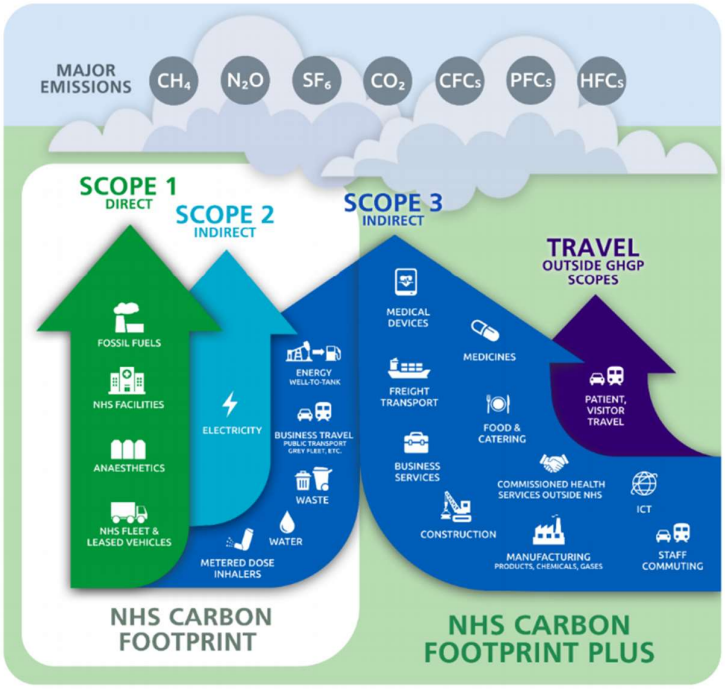
The balance between the amount of greenhouse gas produced by the NHS and the amount taken from the atmosphere is referred to as Net Zero. When the amount we contribute equals the amount taken away, we have attained Net Zero.

The UK is committed to becoming carbon neutral by the year 2050, as per the Climate Change Act 2008. The NHS aim to reach net zero by 2040, for the emissions we control directly and indirectly (the NHS Carbon Footprint) with an ambition to reach an 80% reduction by 2028 to 2032. For the emissions we can influence (our NHS Carbon Footprint Plus), the NHS aims to reach an 80% reduction from the NHS baseline in 2012/13, by 2036 to 2039, with a net zero target by 2045. 2012/13 is the baseline used by the NHS nationally for benchmarking purposes. It should be noted that the UHL estate has changed substantially since this period and this represents a challenge for using the baseline comparatively to assess performance.

UHL 2012-13 utility carbon footprint has been established as a baseline. As part of the NHS Carbon Footprint utility calculations, well-to-tank Scope 3 emissions have been added. The calculations show that the estimated UHL NHS Carbon Footprint emissions in 2012/13 were 55,854 tCO2e. The UHL NHS Carbon Footprint summary shows that based on the 2012/13 baseline, a reduction of 26.29% has been achieved by 2020/21 which equates to c. 32% reduction over the 1990 baseline based on SDU NHS Carbon reduction strategy. Therefore, for UHL to achieve the NHS Carbon Footprint Net Zero target, an additional c.48% reduction would be required in the next 10 years (by 2028-32) from a 2020/21 emissions.

UHL NHS Carbon Footprint Scope emissions (tonnes CO_2e)	2012/13 (Baseline)	2017/18	2018/19	2019/20	2020/21
Scope 1	23,806	28,428	28,857	28,681	25,856
Scope 2	20,172	11,132	8,892	9,951	7,728
Scope 3	11,876	10,375	9,205	9,349	7,584
Total Scope 1, 2 & 3	**55,854**	**49,935**	**46,954**	**47,981**	**41,168**

NHS Carbon Footprint



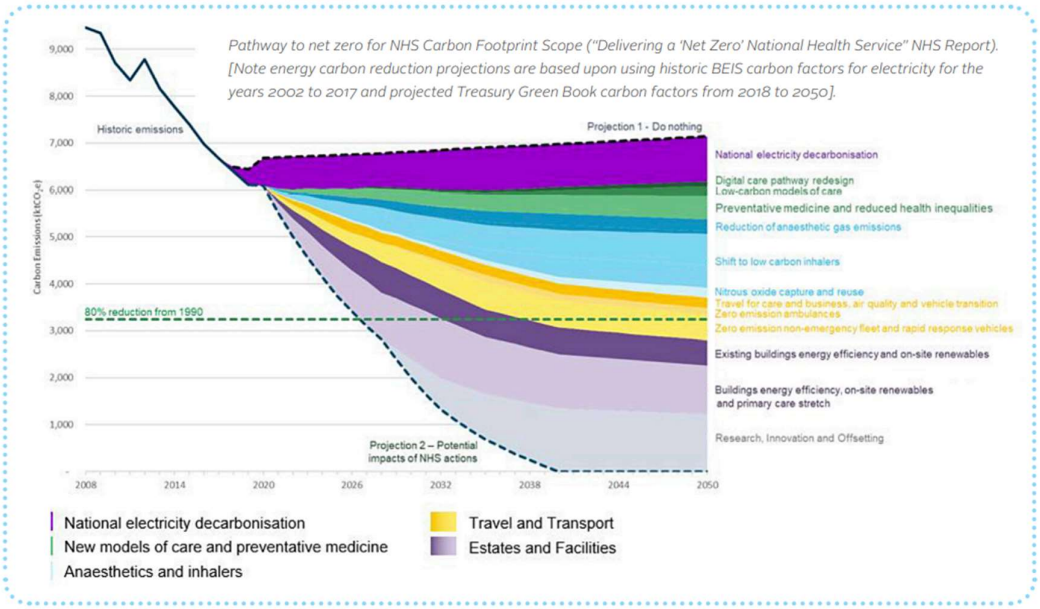
Scope 1: Direct emissions from owned or directly controlled sources, on site

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

Scope 3: All other indirect emissions that occur in producing and transporting goods and services, including the full supply chain, patient and visitor travel

An expert NHS panel has been commissioned to review how the NHS can achieve net zero as soon as possible. UHL commit to monitoring the findings and updating our Green Plan as required.

The NHS "Delivering a 'Net Zero' National Health Service" image below shows the prospective NHS Carbon Footprint 2040 net zero route as heavily reliant on energy efficiency and on-site renewables within new facilities, and to a lesser extent on existing building energy efficiency.



In order to attain the 2040 target, the NHS report's net zero roadmap relies on overcoming challenges other than just reducing energy consumption. For example, the potential to reduce anaesthetic gas impact and other medical treatment impacts, such as a large shift to low carbon medical inhalers, is critical to the NHS's carbon footprint reduction to net zero.

As part of our efforts to reduce our carbon footprint, our Green Plan addresses each area of sustainability to provide a cohesive, holistic view of carbon reductions.

UHL Carbon Footprint

The Trust has already begun its journey towards net zero carbon through the implementation sustainability interventions from our previous SDMP's. We have been successful in reducing our carbon emissions, implementing changes to increase efficiencies and reduce carbon. We are aware of the significant challenge that net-zero brings; reducing our carbon footprint, our contribution to air pollution and our consumption of single-use plastics, whilst simultaneously continuing to provide excellent health care to LLR will be hugely challenging. Not only will our own actions be challenging, but we are also reliant on actions outside of our control that will impact our Trust significantly including decarbonisation of the grid, electrification capacity and supply chain efficiencies.

We have calculated our UHL carbon emissions to the NHS Carbon Footprint requirements between 2017-21. Our baseline is the estimated 2012/13 emissions; with all targets aligned back to this footprint data.

The UHL NHS Carbon Footprint summary shows that based on the 2012/13 baseline, a reduction of 26.27% has been achieved by 2020/21 which equates to c. 32% reduction over the 1990 baseline based on SDU NHS Carbon reduction strategy. Therefore, for UHL to achieve the NHS Carbon Footprint Net Zero target, an additional c.48% reduction would be required in the next 10 years (by 2028-32) from a 2020/21 emissions. UHL 'NHS Carbon Footprint' for year 2020/21 shows 41,168 tCO2e, therefore, an overall reduction of approx. 48% of carbon emissions would equate to 21,412 tCO2e by 2028-32.

In 2020/21, UHL reduced our emissions significantly from 2019/20, however we are aware that COVID-19 pandemic will have had an abnormal impact on our emissions. For full details of our carbon footprint breakdown, please see later sections and the Appendices of this report.

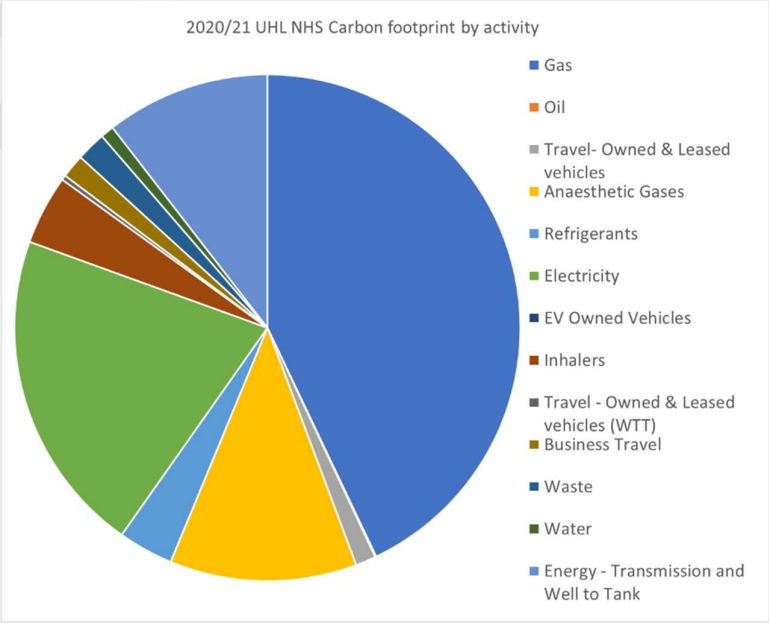
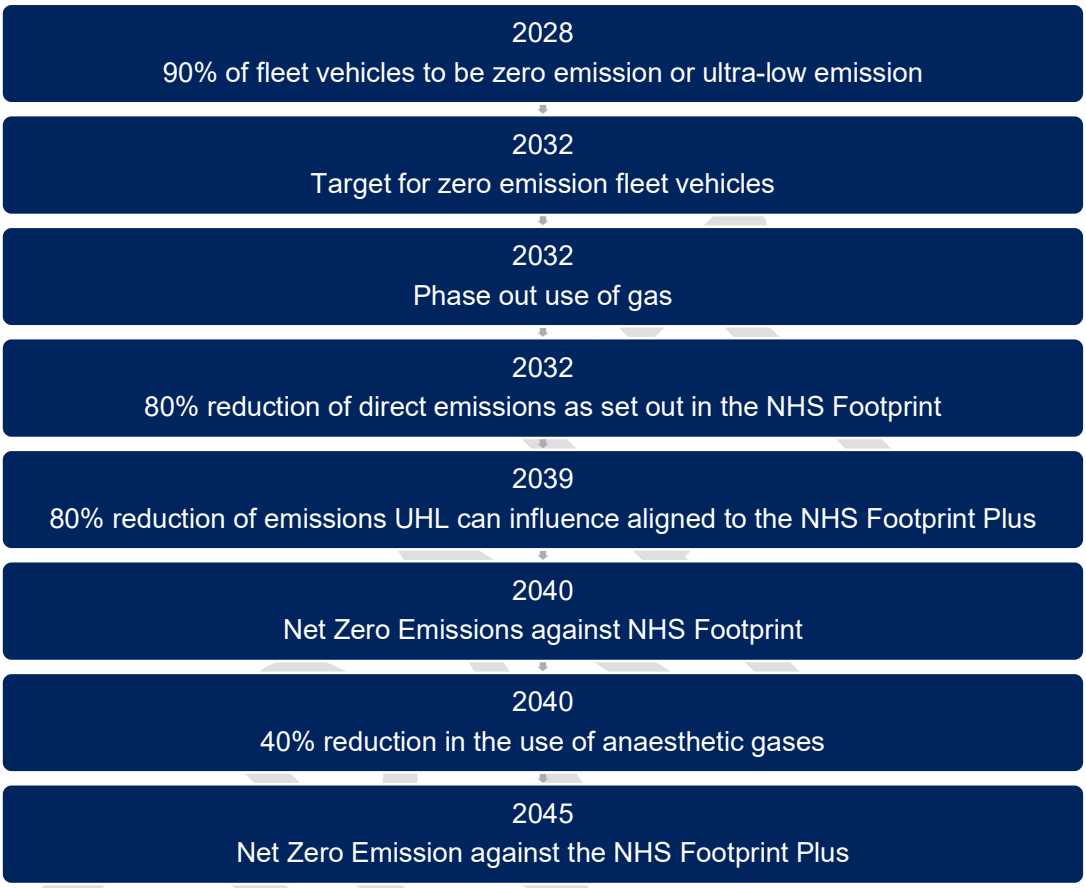


Figure 2

We have outlined below the targets until 2045, highlighting the challenge ahead of us to adapt and rapidly improve our sustainability;



6. OUR PROGRESS TO-DATE (2013-21)

Our progress towards Net Zero and greater sustainability has been on-going for over a decade. We have reported our progress in our annual reports, and key highlights include:

Carbon Footprint and Climate Change

- 2013 – Established a 2012/13 as the Baseline year for our utility carbon emissions
- 2016 – 2021 – Carbon Emissions reporting and compliance (CRC and EU-ETS)
- 2017- 2021 – Sustainability reporting via NHS Estates Return & Information Collection (ERIC)
- 2021 – Signed up and reporting to the UK – Emission Trading Scheme
- 2021 – NHS Carbon Footprint completed in alignment to NHS Carbon Footprint for 2017-2021
- 2021 – Climate Change Risk Assessment and Adaption Plan prepared. Key risks to be integrated in the Corporate Risk Register

Energy

- 2015/16 Combined Heat and Power Units replaced at LRI and Glenfield Hospitals resulting in 30% reduction in grid electricity consumption due to on-site generation. As the grid is decarbonising, the benefit of on-site electricity production is now marginal as regards carbon emissions but has a significant financial saving allowing revenue funds to be utilised to maintain a more sustainable financial position
- Display Energy Certificates obtained for all buildings
- Britecheck surveys undertaken to determine renewable solar energy potential
- 2017-21 – Facility improvements at both LRI and Glenfield including: use of “Low Carbon Technology” and the incorporation energy efficient management strategies, inclusive of LED, variable speed drives, high efficiency pumps and motors, building management systems, insulation, boilers and general application of good working practices and good housekeeping
- Procuring Green Electricity by REGO-backed renewable power since April 2021, which will reduce our carbon footprint by and estimated 12,300 TCO2e +Well to Tank (WTT) in 2021/2022

Sustainability Reporting and Performance

- 2015/16 – Emergency Department and Theatre upgrade projects at LRI both achieve BREEAM Very Good rating (Green Building)
- 2017 – Sustainable Development Management Plan – setting out key actions published

Sustainable Models of Care

- 2017-2021 – various research projects undertaken with support from Charities Hospital Leicester resulting in positive outcomes for patients including: reduction in medication, early

detection and improved, health outcomes, well-being improvements for child patients, and additional support to assist staff to overcome difficult experiences

- 2020/21 – Communications about inhaler options with lower global warming potential initiated

Transport and travel

- Completed Phase 3 of our Travel Action Plan identifying key priorities for the future – with the Phase 4 – Implementation Plan due in 2022
- Introduction in 2021 of electric buses on Enderby Park & Ride (serves LRI) and on Hospital Hopper

Medicines

Inhalers

- LLR Inhaler Decision Aid has been developed to ensure that decisions around inhaler choice consider the patient and the environment
- ICS wide Green agenda for Inhalers - Task and Finish Group established
- The Leicestershire Take AIR (Take Action for Inhaler Recycling) proof of concept scheme will enable to safely and effectively recycle the empty, unwanted or expired inhalers through the post

Anaesthetic Gases

- Our work in benchmarking our inhalation anaesthetic use against other centres and the appointment of a lead to drive reduction of desflurane

Medical Gases

- UHL have implemented a cylinder tracking system which should reduce loss / waste / over-ordering of medical gas cylinders through us better knowing where these are located

Waste

- "Zero waste to landfill" commitment with a current level of 5% which will be reduced during the period of this plan

Single-use plastics

- UHL signed up to the NHS Plastic Pledge; with significant progress in reducing single-use plastic including 33million of disposable cups eliminated a year in patient catering

Greening and Biodiversity

- 2015/16 – Living Wall integrated into Redevelopment of Havelock Street Multi-storey carpark and reduced traffic congestion and emissions
- 2017-20 – Restoration of the dilapidated walled kitchen garden in the grounds of the Mansion House at Glenfield Hospital and created a 'Secret Garden' for the well-being of patients and staff, further work to refurbish the green houses and create a café, and garden of remembrance is planned

7. AREAS OF FOCUS

Our Green Plan is intended to demonstrate the sustainability focus of the wider NHS and our UHL response, focusing on;

- ensuring UHL are supporting the NHS-wide ambition to become the world's first healthcare system to reach net zero carbon emissions
- prioritising interventions which simultaneously improve patient care and community wellbeing while tackling climate change and broader sustainability issues

Our areas of focus are aligned to the main drivers of change and sources of carbon emissions across the NHS.

7.1. WORKFORCE AND SYSTEM LEADERSHIP

OUR PEOPLE AND SUSTAINABILITY

Our people are UHL's greatest asset and our vision is to have the right people with the right skills in the right numbers working in the right place. Only by working together will we create and shape an inclusive culture where our leaders lead with compassion and our people feel they belong, are engaged, and are empowered to take actions that positively impact and influence carbon reduction and broader sustainability initiatives across UHL and the wider health system.

Every employee has a role to play in the implementation of this approach. By encouraging our people to embrace sustainable habits and new ways of working they will be able to take control of their own areas of influence which impact on our hospital, our local community and our staff and patients.

Many positive sustainability initiatives have been seen across UHL, many of which occurred as a result of the Covid-19 pandemic. The learning from these must continue to inform any new business as usual practices. Examples include:

- Local initiatives to reduce waste and promote recycling in clinical areas
- Greater use of technology and less reliance on paper
- An increase in remote and agile working within enabling services, positively impacting our carbon footprint and use of estate during the pandemic
- A reduction in patient footfall and agile working to support the transformation of to support the transformation of appropriate outpatient visits to virtual consultations using technology

Our people have played a significant part in the progress and success of many of the initiatives cited throughout this wider document and this needs to continue at pace. We must now focus our attention on:

- Engagement and development of our people on carbon reduction initiatives, wider sustainability goals and their role in this including corporate social responsibility requirements into contracts (products and employability)

- Bringing together and maximising the learning of the many sustainability committees and working groups already established; learning from healthcare best practice.
- Developing accessible online learning for our people that raises awareness on what sustainability is and its importance to us, our hospital, community and environment.
- Creating an environment for our people to share and pledge their commitments to the carbon reduction and sustainability goals including creating capacity to bring to life the pledges to consistently make a real impact on our carbon footprint

OUR PEOPLE STRATEGY

Our People Strategy, in keeping with the National People Plan and People Promise (2021) outlines our People ambitions to 2026. Priority actions have been clearly articulated across the following 4 pillars and our People sustainability commitments will continue to align to these:

- **Looking after our people** – with quality health and wellbeing support for everyone
- **Belonging in the NHS** – with particular focus on tackling the discrimination
- **New ways of working and delivering care** – making effective use of the full range of our people's skills and experience
- **Growing for the future** – how we recruit and keep our people, and welcome back colleagues who want to return

Our governance structure, e.g. Looking after our People Group, Equality and Diversity Board, and the Strategic People Group will be accountable for the delivery of all key actions against each pillar. With the climate crisis also being a health crisis these 4 pillars link well into the strategic ambitions for both UHL and the NHS. They will support both current and future health quality, belonging to an organisation (NHS) that can make a real difference in the current footprint of 5% of the UK carbon emissions, can develop sustainable healthy practices for treating patients and support attracting a workforce of the future with sustainability values.

The Trust Strategic Workforce Plan sets out how we will address the differences between workforce demand and availability of workforce supply. A key element of our plan is transforming workforce models as part of the LLR system design group work. Much of this transformation is building on our learning during the COVID pandemic and maximising the benefits arising from digital transformation.

OUR PEOPLE SUSTAINABILITY ACTIONS to Dec 31st 2024

	Action	Completion Date	Interdependencies
WSL1	**Engagement** ▪ Scope existing sustainability committees and groups across the Trust ▪ Implement a strategic direction and vision with the scoping findings to identify operational actions and coordinate actions to impact on sustainability.	Q2 2022 2022	CMG's/Corp services CMG's/Corp services Comms team

	▪ CMG and Corporate Services People groups, to plan and implement local engagement forums local to their needs and enable capacity for forums to meet and take forward ideas; supporting project plans and resource needs where approved ▪ Carbon reduction and wider sustainability to feature as a regular agenda item at monthly CEO briefing ▪ Scheduled and targeted awareness events impacting both health and carbon footprint e.g. promoting alternative transport option ▪ Scope options for staff pledge environments ▪ Scope resource requirements for engagement with Green Plan / sustainability initiatives ▪ Update Trust on impact forums and activities are having quarterly throughout 2023	2022 Q3 2022 Q1 2022	Comms team/***'Salary Maxing'*** Comms team
WSL2	**Induction and Training** ▪ Green plan to be incorporated in induction presentation and staff handbook for new UHL employees ▪ Development of e-learning module on Waste management / sustainability ▪ Central support with training and development offer to support wider initiatives identified to support this agenda	2022 2022 2022	Estates and Facilities Team Other services as required
WSL3	**Developing Workforce models** ▪ Develop UHL agile working processes as part of NHSE/I Flex for the future programme ▪ Workforce plans built on service and digital transformation ▪ Support the appointment to OR development of people aligned to the Carbon reduction or wider sustainability goals ▪ Redesign employment contract to include corporate social responsibility	2022 2021 and ongoing 2023/24	System Workforce planning teams Other services as required
WSL4	**Health and Wellbeing** ▪ Build sustainability principles into the delivery of Health and Wellbeing programmes	2022	Looking After our People Group
WSL5	**Staff benefits** ▪ Review of ***'Salary Maxing'*** schemes to promote those supporting the carbon reduction agenda ▪ Promote and encourage use of public transport for travel to work / provision of sustainable models of care ▪ Incentivise the use of eco-friendly travel options and encourage use of public transport	2024 2023 2022	***'Salary Maxing'*** & Comms team Travel wise Team Comms team

WSL6	**Developing Digital HR processes** ▪ Review HR processes with a focus on implementing digital options, e.g., digital forms ▪ Increased use of Electronic Rostering to enable payments ▪ Procurement contracts to include CSR and carbon footprint requirements	2022 2020/21	Comms team Comms and Payroll provider

Our Commitment for the future

Over the next five years, the services we provide will continue to evolve to ensure that every patient continues to receive high-quality care every time. Through the creation of our ICS, UHL and the wider LLR system will continue to strengthen their position to become a system and employer of choice; who are clinically and financially sustainable with aligned people and sustainability plans.

7.2. SUSTAINABLE MODELS OF CARE

Our vision is to utilise technology to deliver sustainable healthcare that is future-proofed and meets the needs of the communities that we serve within Leicester, Leicestershire and Rutland.

There are a wide range of ways in which sustainable models of care can support UHL's vision to deliver NZC and wider sustainability goals. These cut across organisational boundaries and all clinical services and include:

- Telemedicine/virtual consultations (linking to Digital Strategy and Clinical)
- Provision of care closer to home (part of a wider engagement with community partners)
- Default preferences for lower-carbon interventions, where they are clinically equivalent
- Focus on preventative care and well-being and optimising the use of diagnostics
- Nurture Through Nature/Wellbeing - (links into our Estates and Facilities Strategy)

TELEMEDICINE/VIRTUAL CONSULTATIONS

According to the NHS England Guidance it is possible that use of virtual consultation can avoid carbon emissions by reducing travel for both staff and patients and reducing demand for physical space in premises.

UHL has accelerated the use of virtual consultations as a result of the on-going COVID-19 pandemic, and close to 50% of consultations were undertaken virtually in 2020/21 up from 21% in 2019/20

	Year 0 (2019/20)	Year 1 (2020/21)	Year 2 (2021/22)	Year 3 (2022/23)	Year 4 (2023/24)	Year 5 (2024/25)
Total Non-Face to Face	178,997	445,675	329,748	332,587	335,505	338,540
Non-Face to Face %	21%	50%	40%	40%	40%	40%

Looking forward, UHL will aim to work in line with the 2021/22 NHS Planning Guidance, and where outpatient attendances are clinically necessary, a target of 40% of outpatient activity to be delivered remotely, has been set, which should result in direct and tangible carbon reductions.

Actions

The targeted levels of virtual consultations have been taken into account during the planning of UHL's reconfiguration and steps taken to ensure the necessary infrastructure (space, IT equipment, and supporting administrative resources) is in place to deliver moving forwards.

UHL will review and report the level of virtual consultations, with a target of achieving a minimum of 40% each year up to and beyond 2025.

UHL will ensure that reconfiguration plans incorporate adequate space (including requirements such as sound-proof pods etc) to accommodate the targeted 40% virtual consultations.

Transition to 40% virtual consultations will bring about economic and environmental benefits. A recent scoping study (The Potential Economic Impact of Virtual Outpatient Appointments in the West Midlands 2018) highlights a range of benefits from virtual consultation.

UHL will implement an action to evaluate the impacts arising as a result of the transition to 40% virtual consultations including reduction in carbon emissions and travel cost savings for patients, time savings etc. Use of IT capacity (cloud services and IT platforms) will form part of UHL's NHS Carbon Footprint Plus that will need to be quantified.

PROVISION OF CARE CLOSER TO HOME

Primary and Elective Care

Our plans include creating community health and care hubs, co-locating health and care staff together. These are planned to be established across LLR, providing vital community bases for both staff to work from and patients to be treated within, negating long journeys, often made by car. One such example would be our aspiration to work with the Rutland County Council, the Rutland Primary Care Network and our partners in LPT to establish a Rutland County Hub as a pilot – key benefit will be provision of care closer to home saving patients an average of 70-100 miles for round trips to our hospital sites within the Leicester City boundary. The hub approach acknowledges that in rural areas across the County, there are areas with low broadband access and areas with a high level of digital immaturity, which may be amplified by difficulties faced in accessing / using IT within the population. We plan to pilot these Integrated health and care hubs through 2022 with our end goal to have implemented all hubs by the end of 2022, serving all 1.3m residents of LLR.

There will be a consequential but small carbon/environmental footprint associated with the new physical hubs – an in-depth understanding of this impact will be included as part of the evaluations of each of the pilot sites.

The UHL Green Plan for care closer to home will be expanded on in the wider ICS Green Plan which will articulate the wider roles of partners within the ICS across LLR.

Actions

Plan for hubs to be defined by February 2022 and Implemented by the end of 2022. Impact of the move to hubs to be evaluated along with the increased use of virtual consultations.

Plans to be integrated into the ICS Green plan by March 2022.

Non-Elective Care

We know that we have often duplicate and triplicate services caring for people across our various NHS and care agencies. Our aim is to bring these services together as an integrated team enabling the patients' story to be told once (using integrated IT systems) and a joint health and care response provided as needed to our patients. Our modelling shows that this would enable less ambulance call outs / conveyances but potentially more home visits by health and care staff. For example, we currently have anywhere between 300-400 ambulance calls per day, with c150-200 patients transported to acute sites. Our plans include recruitment of 99 additional community healthcare staff and c. 60 care staff by

April 2022 for this programme and this will mean that a joint health and care response will be provided instead of an ambulance.

This speaks to our patient feedback – in that patient want treatment in their own homes where possible – and will support us to see the right patient at the right time. Another consideration is the mode of travel used to visit the patients and the need to transition employee travel into electric or other zero emission vehicles.

FOCUS ON PREVENTATIVE CARE AND WELL-BEING

Delivering Sustainable Models of Care will see the Trust progress on many fronts – the optimisation of patient pathways and applying a Get It Right First Time (GIRFT) approach are key focus areas for the Trust to provide preventative care and well-being for patients.

GIRFT is a balance between the use of early and appropriate levels of diagnostics and the use of alternative approaches to treatment and patient care.

With the support of the Leicester Hospitals Charity (LHC) the Trust has been able to achieve positive outcomes benefitting both patients and helping to deliver our NZC and sustainable goals.

The following case studies highlight past successes which the Trust is looking to both build on and better understand the contribution to our NZC journey, wider sustainability and social value. Full details can be found in Appendix B.

CASE STUDY 1 - NEW EQUIPMENT TO IMPROVE DIAGNOSTICS AND REDUCE CARBON EMISSIONS

With the support of LHC, UHL has been able to purchase Ultrathin Transnasal Endoscope (UTE); this equipment vastly reduces the use of anaesthetics with global warming potential, reduces staffing needs and time for procedures. As a general anaesthetic isn't required, the procedure can be scheduled more quickly and completed with a reduced carbon footprint.

Action: UHL is planning to purchase additional UTE to support this.

CASE STUDY 2 - SUPPORTING OUR STAFF THROUGH DIFFICULT EXPERIENCES

Our UHLotto supported by LHC supports the Trust's Wellbeing at Work programme to benefit all of our staff, including activities, therapies and discounts to help staff enhance their physical and mental health. The remaining funds are used for additional, larger wellbeing projects; focused supporting their mental health and wellbeing and enabling staff to reflect, empathise and learn from a wide range of experiences and situations to improve the patient's journey.

CASE STUDY 3 - RESEARCH TO IMPROVE PATIENT'S LIVES

The John Walls Renal Unit at Leicester General Hospital helps to treat people with kidney disease not just from Leicestershire & Rutland, but from parts of Lincolnshire, Northamptonshire and

Cambridgeshire. The renal team treat hundreds of people who complete kidney failure and need dialysis treatment or a kidney transplant to take the place of the kidneys – but also focus on preventative care Leicester is now the leading centre in the UK for research into exercise for kidney disease. By providing support and early intervention – it is hoped to be able to improve patient outcomes and reduce additional healthcare requirements.

Action: Further research to evaluate the outcomes of the research and benefits to the Trust in terms of reduced healthcare impacts etc.

CASE STUDY 4 - IMPROVING FACILITIES TO SUPPORT OUR PATIENT'S WELLBEING

It is well researched that being outdoors and surrounded by nature is beneficial for a child's environmental and spiritual health. The new play-roof at Windsor Building, funded through donations, has been designed to encompass activities that holistically benefit the health and development of young patients. Research shows that a holistic approach to care accelerates the recoveries of young patients.

CASE STUDY 5 - ENABLING MORE TAILORED CARE FOR OUR PATIENTS

Thanks to LHC Charity fundraising, the Contrast-Enhanced Spectral Mammography (CESM) Clinic has opened to allow for improved mammography investigations. Previous MRI investigations required are significantly more time consuming and energy intensive, so the transition to CESM has provided a range of economic, healthcare and environmental benefits.

Action: Consider evaluation of social and environmental benefit of these outcomes.

CASE STUDY 6 - ENABLING "FIRST OF ITS KIND" TREATMENT TO SAVE LIVES

The VaLS clinic is the first of its kind and aims to provide a rapid access service to adult patients suffering from suspected CLTI or Diabetic Foot Ulceration (DFU).. The clinic has witnessed a 50% decrease in the rate of major amputations when compared to the other data – meaning that the clinic is not only helping to save limbs, but those requiring amputations are more likely to have a less-severe minor amputation. Less-invasive procedures leads to quicker rehabilitation and an improved quality of life for these patients.

Action: Consider evaluation of social and environmental benefit of these outcomes.

ACTIONS FOR SUSTAINABLE MODELS OF CARE (SMC)

Action #	Details of Action	Completion Date
SMC1	UHL to undertake 'NHS Carbon Footprint Plus' to understand the impact of Commissioned Health services outside UHL and provided Business services - review also wider economic and social benefits for patients arising from virtual consultations and care closer to home.	Jan 2023

SMC2	Identify and report 2021/22 Virtual appointments and set targets for 2021/22 onwards - review progress annually and ensure capacity to deliver is adequate	Jun 2022
SMC3	Review potential for provision of care closer to home and define strategy - establishment of	Dec 2022
SMC4	Prepare a report and carbon case studies to share with other Trust in best practice case studies identified in provision of sustainable models of care	August 2022
SMC5	Identify priority areas for further action and set out a plan (working with other stakeholders) to fund research and develop best practice	2023
SMC6	Calculate the Social Value in economic, social and environmental impact from key initiatives	2023

7.3. DIGITAL TRANSFORMATION

UHL's Digital and Technology vision is to employ deeply-integrated systems that achieve our strategic goal of providing high performing services in relation to our peer group. The vision is to be recognised as delivering a trusted, secure, class-leading IT service enabling a seamless digital service to our staff, patients and researchers.

There are two key threads of thinking at present related to the Digital Transformation of the Trust as follows:

Clinical – with a target to deliver alignment/accreditation to the international HIMMS 7 standard

Estates – smart building system managing the indoor environment for the comfort and security of patients and the efficiency of systems.

UHL have a Digital Healthcare Vision and Digital Strategy, which are summarised below. Our Digital Healthcare Vision moves us from Todays Healthcare through to Integrated Health Management by 2026, resulting in efficiency gains and improved quality of care.

These approaches align to the Blueprint set out in the "Health Infrastructure Plan Blueprint for Digitally Advanced Hospitals", which includes the following key themes:

- Digitally empowered patients
- Digitally enabled staff
- Interoperable and intelligent systems
- Hospitals without walls supporting integrated care (virtual care – links to Sustainable Models of Care as set out in the preceding section of the plan)
- Smart buildings

The Trust's Reconfiguration provides a key opportunity to define and integrate this blueprint, and to ensure that the systems integrate and remain viable in the longer term it is key to ensure the correct decisions are taken out the outset.

To this end, UHL will take the following steps:

- Engage all key stakeholders - to define needs
- Review integration of systems and potential redundancies
- Ensure interconnectivity and interoperability

We believe that the Digital Design principles will support the operation of a sustainable estate at UHL.

The Trust will support safe and effective care by progressing our e-Hospital plans to implement user-friendly and integrated solutions that make people's jobs easier to do; whilst retaining security requirements [10].

We are focusing on the following areas to improve patient care management alongside efficiencies:

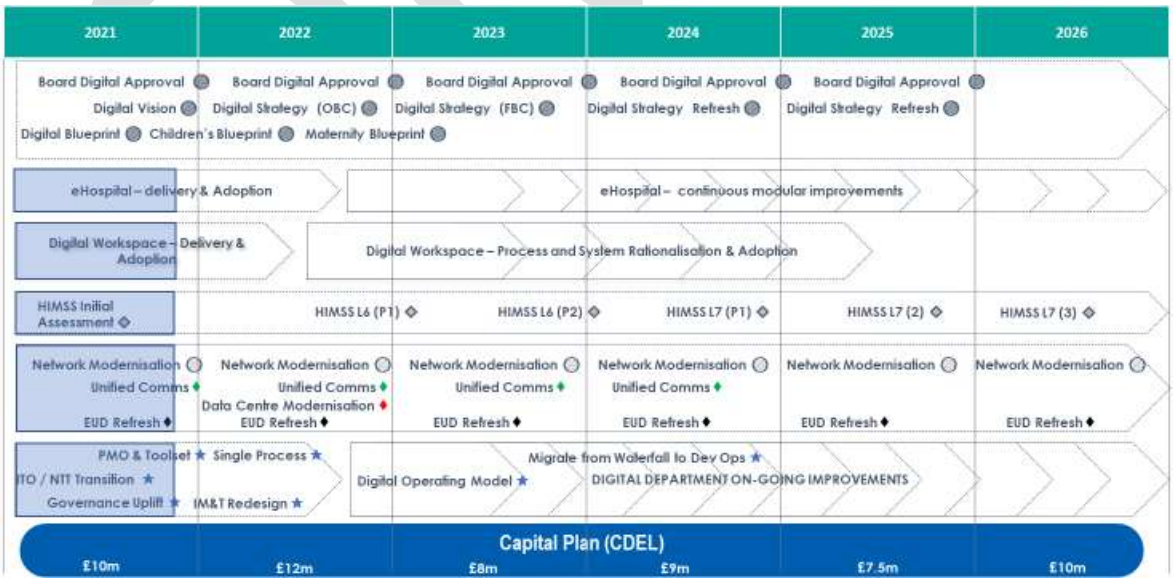
- To enable visibility and the sharing of patient records real time, anywhere, anytime
- To improve patient safety through better alerting and decision support based on capturing clinical data and transforming it is not dashboards and clinical analytics
- To improve the efficiency of our workforce through better workflow referrals, treatment and transfer to other health and social care partners
- To improve patient flow through ED, the wards and onward discharge and transfer out
- To improve and enable outpatient transformation
- And, for the purposes of the Green Plan, achieve a transformation from paper-based systems to digital platforms

Looking ahead

By 2025 our targets relating to the Green Plan include;

- Paperless patient records
- Enable staff to work from any location
- Enable virtual clinical services
- Deliver back-office optimisation
- Leverage inward investment through research
- All supported through a safe, secure scalable infrastructure

The below graphic shows our ambitious roadmap for digital improvements;



Action Plan

Action #	Details of Action	Completion Date
DT1	UHL to undertake 'NHS Carbon Footprint Plus' to understand the impact of carbon emissions from IT	2023
DT2	UHL to determine the impact of shifting from paper-based systems to e-platforms as a result of digital transformation and share success stories related to carbon reduction, resource use and waste reduction	End 2022

7.4. TRAVEL AND TRANSPORT

We are aware of our travel and transport sustainability impacts, particularly on our carbon footprint. UHL reconfiguration programme and the new services provided are likely to create significantly changing patterns of travel during the build programme, which provides an opportunity for us to progress our vision of greener travel and transport across UHL.

As part of our journey towards greener travel and transport, the Trust has developed a Travel Action Plan (TAP) to provide a greater choice of transport options to site users. It sets out the strategy for reducing dependency on the private car while facilitating and encouraging travel by healthier and more sustainable modes. The aim of the Travel Action Plan (TAP) is to take the measures suggested in the 2019 Travel Plan and to propose and develop new measures to respond to the needs for enhanced sustainable transport links to serve the requirements of the reconfiguration programme.

To address sustainable Travel and Transport, a variety of actions will be required. We are aware that travel patterns and requirements are likely to change, therefore will monitor changes to provide the best progress possible to green our transport impacts. Our travel actions are split between the existing TAP, and further actions to reduce our travel carbon footprint; we will address our impacts through Trust wide action.

Progress to date

- UHL have carried out the carbon emission calculations for the Business Travel as part of the 'NHS Carbon Footprint' calculations;
- Phase 3 Travel Action Plan (Prioritising) have been finalised with Board Executive sign-off, which includes an emerging sustainable travel network for the three UHL sites based on Leicester City Council investment, including Santander Cycles Leicester;
- UHL TAP Prioritising (Phase 3) have made significant progress to-date:
  - Effective partnerships now in place with local transport authorities (Leicester, Leicestershire and Rutland), transport providers and major neighbouring employers
  - Securing of external investment to improve cycle storage at LRI and GH
  - Plans now being developed for new Park & Ride from Beaumont Centre for Hospital Hopper (and other bus services) and short-term Park & Ride from LGH
  - Introduction in 2022 of electric buses on Enderby Park & Ride (serves LRI) and on Hospital Hopper
  - PlusBus ticketing now introduced on Hospital Hopper (i.e. single rail and bus ticket)
  - Co-creation of TAP through stakeholder engagement incl. Healthwatch and Patient Reps

Looking ahead

UHL TAP (Phase 3) have identified the following priorities for introduction in the next 24 months:

- Rebuild transport webpages for staff and public.
- Introduction of improved cycle storage, with consideration to improved changing rooms, showers and lockers.
- Invest in a Santander Cycles docking station at GH.
- Provide staff discounts on tickets for sustainable travel.
- Increase the frequency of the Hospital Hopper.
- Encourage an increase in Park & Ride (P&R) hours to cover 0600 until 2130 Monday to Friday.
- Support the ICU move in May 2022 to GH through assessing transport and parking needs, including consideration of Park & Stride from County Hall.
    - Introduce a three-year temporary P&R from LGH using the Hospital Hopper service
    - Introduce Personalised Travel Planning to staff.
    - Introduce a car park management system that encourages a more flexible form of transport decision making.

UHL TAP have also made significant positive impact on the wider community:

- Through partnership working the UHL are adding value and in turn helping to generate wider benefits e.g. the e-bikes installation at County Hall for Leicestershire County Council would not have happened if the Trust had not invested in e-bike docks on their site;
- The local transport users, Leicestershire Partnership Trust (LPT), University of Leicester (UoL) and De Montfort University(DMU) have also benefited by the UHL sustainable transport initiatives, such as the Hopper Bus, which is a public service (the LPT, UoL, DMU staff and students can benefit from this service for free at point of use);
- UHL Letter of support for Zero Emission Bus Regional Areas (ZEBRA) scheme to support local transport authorities to support the introduction of zero-emission buses;
- National strategy for buses emerged Bus Back Better; which will be a fundamental shift. Formal partnership with Leicester City Council for additional funding.

ACTIONS FOR TRAVEL AND TRANSPORT (TT)

Action #	Details of Action	Completion Date
TT1	Trust to undertake 'NHS Carbon Footprint Plus' calculations, to understand the carbon impact of Patient & Visitor travel, Staff Commuting and Freight transport.	Jan 2022
TT2	UHL to sign up for a free Green Fleet Review;	Dec 2021

TT3	UHL to Reduce air pollution associated with business mileage and fleet by 20%	2023/24
TT4	Trust to budget and agree the key priorities set within the TAP Prioritising (Phase 3) report	Dec 2021
TT5	UHL to develop the TAP Delivery (Phase 4). The key priorities in for Phase 4 include: Actions to support the ICU move to GH e.g. Santander Cycles Leicester e-bike dock at GH, Park & Ride from Beaumont Centre, short-term transport facility bridging ICU move and start of Park & Ride in early 2022; Development of online travel portals for staff and public; Engagement with Energy and Infrastructure Strategy to ensure TAP priorities and design requirements support one another; Sustainable travel network are developed during the Reconfiguration Programme Start of new TAP Delivery Groups for Phase 4. Engagement with Patient Partners and Healthwatch Leicester & Leicestershire and Healthwatch Rutland will be through their own separate meetings	Jan 22 – Jan 25
TT6	Ensure that any car leasing schemes (via Knowles) restrict the availability of high-emission vehicles (Operational Planning and Contracting Guidance and Standard Contract)	Dec 2021
TT7	End business travel reimbursement for domestic flights within England, Wales and Scotland over 2020/21 (Operational Planning and Contracting Guidance)	Dec 2021
TT8	Salary sacrifice policy to be reviewed EV to be extended over £1,000	Dec 2021

7.5. ESTATES AND FACILITIES

Our vision for Estates & Facilities is to "become the best Estates & Facilities team in our peer group by achieving top quartile performance in both cost and quality for all of our activities"

Our operational vision is to provide pro-active engagement from an effective team to make value-driven, evidence-based decisions, maintaining a safe, secure, compliant, resilient, and sustainable estate, that responds robustly to challenges.

Sustainable management of our assets and utilities presents one of the most significant opportunities for the Trust in terms of delivering the NHS NZC vision. Our buildings and critical infrastructure represent a sizeable proportion of our energy and our largest Carbon Hotspots.

UHL has been confirmed as one of 48 hospital developments being delivered as part of the National 'New Hospital Programme' (NHP). UHL is one of the 8 Pathfinder hospitals (now described as cohort 3) - this presents an unprecedented opportunity for the Trust to move into a leadership position on sustainability including a move towards key goals such as NZC emissions.

Over the next 10 years, the Trust will implement a programme across Estates and Facilities that will positively impact our energy use and carbon emissions, waste and water management, air emissions, and the biodiversity and greening of our estate.

As part of our Estates Strategy, we will look at other beneficial uses of the estate by the patients, visitors and staff considering place making and how to make UHL more vibrant and operationally effective for patients and their visitors and our staff.

The reconfiguration and refurbishment programme brings the following challenges and opportunities:

- New buildings targeted to be rated BREEAM Excellent and achieve NZC
- Refurbishment Projects targeted to be rated BREEAM Very Good and at least NZC ready (NB in the short to mid-term - it is accepted that some of our existing buildings will continue to use gas for heating. It is nonetheless recognised that refurbishments are undertaken in such a manner to ensure allow a transition in the longer term and are therefore NZC Ready e.g. by moving away from steam heating to low temperature hot water (LTHW) systems, that in the future could enable a move from gas fed boilers to air or ground sourced heat pumps or other district heat).
- Rationalisation of the Estate from 3 to 2 acute sites
- Gas use across the Trust represents close to 50% of the carbon footprint after procurement of green electricity is taken into account; nearly 50% of the gas is used to supply the CHP units to provide electricity
- Use of refrigeration systems with low global warming potential represents a longer-term opportunity

- Increased electricity demands across the estate – both to accommodate growth, additional equipment/digitisation of the Trust and the shift away from gas, may see challenges in terms of the supporting infrastructure. The Trust will review these demands and implement plans to balance the capacity with demand. This is key to ensure resilience of the estate. This will include a consideration of future impacts of climate change such as increased summer heatwaves over extended periods. The move from gas to electric will require consideration of resilience and capacity to mitigate risk.

Underpinning our planning from a NZC and sustainability perspective are considerations including our commitment that we will:

- Carry out Sustainability Impact Assessments (SIA) for critical infrastructure works over £100,000 as part of the business case including a consideration of the full lifecycle costs of significant investments. These assessments will identify both the positive and negative sustainability impacts of the planned infrastructure works (or equipment purchase) and mandate any sustainability mitigation or enhancement opportunities as part of the decision-making process overviewed by the Director of Estates & Facilities
- Meet NHS England requirements for both new building and major refurbishments to deliver net zero carbon outcomes and deliver NZC by 2040
- Meet expectations from key donors including those providing funding through the Leicester Hospitals Charity to report outcomes and impacts aligned to expectations

Progress to date

- Compliance and statutory reporting (Carbon Reduction Commitment CRC, European Union Emissions Trading Scheme EU- ETS, Estates Return Information Collection ERIC, Premises Assurance Model PAM, Medium Combustion Plant Directive MCPD etc)
- 2017 to 2021 – Facility improvements at both LRI and Glenfield including: use of “Low Carbon Technology” and the incorporation energy efficient management strategies, inclusive of LED, variable speed drives, high efficiency pumps and motors, building management systems, insulation, boilers and general application of good working practices and good house-keeping
- As part of planned and reactive maintenance the Trust has upgraded a wide range of equipment including:
  - Repairing leaking pipes to reduce water use and service disruption.
  - Insulation of hot and chilled pipes to conserve energy
  - Upgrades to large plate heat exchangers
  - Installation of smart meters to fiscal meters to allow better management of energy use
- Building Management System review and re-configuration of temperature set points
  - Appoint a Head of Sustainability for the Trust

- Procurement of 100% Green Electricity (from April 2021 will result in c. 12,000 TCO2e per annum reduction over 25% of UHL's current carbon Footprint.

Looking Ahead

- To appoint a Head of Sustainability to have an oversight of the progress Estates and Facilities and other areas of the Trusts operations as regards the Greener NHS
- Conduct Sustainability impact assessments for all critical infrastructure works in excess of £100k
- Training of Estates and Facilities teams on the benefits and approaches to sustainable estate management (energy, waste, water)
- Provide formal energy auditor, and energy manager training for Energy Managers
- Undertake audits of energy and waste to identify opportunities for operational control and efficiency (these are addressed in more detail in the carbon and waste sections of this plan)
- Run an on-going Energy Awareness Campaign across the Trust
- Planned research into optimisation of space utilisation and use of the Internet of Things to improve efficient use of resources - integration of Estates and Facilities into the wider digitisation strategy
- The Trust will review the potential for use of space by staff and third sector groups outside of normal working hours to both provide both social value to the community and potentially as source of revenue
- Supply chain review – to evaluate opportunities to use a more local supply chain, and sustainable products and services – starting with larger supply contracts (this is addressed in more detail in the procurement section of this plan)
- Programme of improvement works for existing buildings subject to feasibility study;
  - Replacement of windows or secondary glazing
  - Upgrade heating controls
  - Upgrade Power Factor Correction
  - Install smart metering to large consumers – on-going
  - Install Variable Speed Drives
  - Replacement of the pneumatic Johnson control systems
  - Upgrade Phase 1 & 2 Main Circulating Pumps
  - Replace the Medical Air Vacuum pumps.
  - Insulate the take-off pipes & upgrade the evaporators to the VIE

Leicester Hospitals Charity

Where appropriate the Trust will seek funding to undertake decarbonisation and sustainability improvements, with business cases considering whole life costs. Funding from the Leicester Hospitals Charity (LHC) has and continues to be important to UHLs strategic development.

The Leicester Hospitals Charity has made the purchase or construction of assets to donate to UHL NHS Trust a key focus. The aim of this is not to replace exchequer funding or for contingency purposes, but to fully fund, or add value to, capital projects with the sole view of improving patient experience. This may include better more personalised environments; relocation of services to provide better care; or better environments for staff to support the Trust in attracting staff.

Some examples of projects supported are:

- Being an integral partner in the build of the new Leicester Children's Hospital, providing close to £7.5M in funding for Phase 1, and further funding for Phase 2
- Providing over £400K funding for the Same Day Emergency Care service at Glenfield Hospital
- Raising £1M for the refurbishment of the Children's Cancer Ward

Future capital projects the LHC intends to fund have been chosen with a view to supporting the Trust with its reconfiguration plans, these include:

- A new Spiritual Care Centre at the LRI
- Areas of the new Women's Hospital, including a Neonatal unit
- Areas of the new ITU building
- Transformation of a ward at Leicester General Hospital into Type 1 Diabetes and Technology Hub

Such significant capital projects undertaken using Charitable Grants will have expectations aligned to environmental improvements (BREEAM, Net Zero Carbon, meeting social/patient needs etc), and UHL is committed to capturing and reporting outcomes to LHC to enable its impact reporting to donors.

UHL will work the LHC to refine processes for impact reporting both within the Trust and to the charity.

UHL recognises that this is not only important for transparency, but that it will also be an important enable for LHC's future fund raising in support of the Trust.

ESTATES AND FACILITIES ACTIONS

Phase 1 – Implementing the Green Plan 2022-2025

Setting out plans for NZC - on-going Estates and Energy/NZC strategy will be defined by end of 2022.

Plans to address longer term waste, water management and biodiversity plans for the Estate, and dovetail with the Travel Action Plan.

Key initiatives to be defined including:

- Implement plans/designs to transition away from steam heating to LTHW systems
- Elimination of oil use and remove natural gas
- Links to district heat networks
- Design compliance with NZC strategy / NZC 'ready' for refurbishments
- On-site renewables strategy defined
- Site energy demand management - review of capacity of system to meet demand
- Key fabric improvement projects to reduce heating and cooling loads
- Trust wide Energy Savings Campaign and behavioural change energy savings
- LED Lighting retrofits completed (co-dependency around digitisation strategy – IoT, security and controls tbc - see also Digital Transformation section of plan)
- Sustainability Performance of Buildings – UHL has commissioned BREEAM assessments of the new and existing buildings to drive performance for New Builds and Refurbishments and a path to achieve Excellent and Very Good rating respectively
- Engagement with key external stakeholders regarding land use, buildings, district heat networks, sustainable travel hubs, carparking strategies etc.

Phase 2 - Green Plan and Core Refiguration and Refurbishment 2026- 2030

- Retiring steam-based heating systems
- Transition from use of gas to electric (ASHP + GSHP)
- Installation of on-site renewables and battery storage systems to optimise use – demand side management – energy usage options
- Delivery of the NZC strategy in stages
- Rationalisation of space including utilisation for community benefit out of hours
- Placemaking and enhanced biodiversity and greening around the site - implementation of agreed green and blue infrastructure from the first Green Plan Phase
- Key improvements to infrastructure to alleviate traffic congestion, associated air pollution and support the implementation of the Travel Action Plan
- Implementation of integrated digitisation strategy
- Consideration of new/alternate technology

Phase 3 – Long-term Estates and Facilities Green Plan Implementation

- Progressively phasing out use of gas through consideration of alternative solutions

WASTE REDUCTION AND THE CIRCULAR ECONOMY

UHL generates significant amounts of domestic and clinical waste and are legally responsible for appropriately segregating, handling, and disposing it. UHL are committed to eliminating needless resource consumption across all of our organisational activities.

UHL Waste Management Policy and Guidance is currently being reviewed which will set out our NHS Trust Policy and Procedures for the management of all waste streams.

UHL progress to-date

- Waste Management Policy currently being reviewed by all major stakeholders, considerable changes are anticipated
- "Zero waste to landfill" commitment with a current level of 5% which will be reduced during the period of this plan
- Signed up to the NHS Single-Use Plastics Reduction Campaign Pledge for the reduction of the amount of plastic waste
- Taken action for inhaler recycling through Leicestershire TakeAir initiative

Looking ahead

- By the end of 2021, UHL to create full Waste Management Committee. The Waste Management Group shall be chaired by the Head of Estates & Facilities, or their nominated deputy and will, so far as is reasonably practicable to carry out the duties as set out in the Terms of Reference of the Waste Management Committee.
- By quarter 2 of 2022, UHL to complete a Trust-wide waste audit to understand the waste management practices across the Trust, leveraging existing recommendations from previous waste audits.
- By mid-2022, UHL to increase awareness and behavioural change. UHL to ensure that a range of training is provided including information and instruction measures appropriate management and reduction of waste the tasks being carried out.

WATER

Existing estate

UHL uses a considerable volume of water; the cost and associated environmental consequences present a significant opportunity for improvement throughout the planned reconfiguration. The age of the existing estate has presented challenges due to the standard of the existing drainage system and confirmed ongoing issues with the drainage system. Currently, if the flow rates are reduced the system gets clogged, creating further issues and maintenance costs.

New development

The new-build developments as part of the reconfiguration programme will be pursuing a minimum of BREEAM Excellent, and therefore it is anticipated that BREEAM water consumption targets for new-build developments will be pursued, including incorporation of low flow rate water fitting.

Looking ahead

- Monitor water consumption across our Estate and deliver a programme of targeted water efficiency schemes, such as BREEAM water consumption targets for new build developments;
- Review the opportunities to replace the drainage system in existing buildings;
- Use Remote water monitoring.

GREEN SPACE AND BIODIVERSITY

Green space and biodiversity play a key role in improving patient recovery rates and patient experience, as well as supporting staff wellbeing. Nurturing and improving green space benefits mental and physical wellbeing. It can lead to improved air quality, noise reduction, supports biodiversity and helps combat climate change.

The UHL estate has constraints due to our city centre location, however we are committed to improving green space and biodiversity where we can. “The Secret Garden” is a fantastic initiative by UHL and its partners to create a garden oasis for hospital staff, patients and visitors.

The Leicester Hospitals Charity has supported biodiversity and greening of the Trust estate. Over the past few years, LHC have funded various amenities across all three sites, such as an inner courtyard garden at Glenfield and Leicester General Hospitals and supplies for the Secret Garden Project. Looking to the future, LHC are working with UHL to investigate the development of garden and outdoor spaces at the LRI, which currently has limited outdoor amenity/green space for staff and patients.

NURTURE THROUGH NATURE

Green space and biodiversity play a key role in improving patient recovery rates and patient experience, as well as supporting staff wellbeing. Nurturing and improving green space benefits mental and physical wellbeing. It can also lead to improved air quality, noise reduction, supports biodiversity and helps combat climate change.

Located behind the Mansion House on the grounds of Glenfield Hospital, the Secret Garden aims to provide a tranquil space of natural beauty for patients, visitors and staff and the wider community to all enjoy. The one-acre garden space is split into two areas where the first section as stated above is for staff, patients and the public. There is an organic growing space aiming to attract wildlife to the garden. Currently the garden hosts a badger set and bird boxes which are currently host to a range of bird varieties. The project is set to be operational by December 2021.

Moving forward, the “Nurture through Nature” programme is intended to improve wellbeing for patients. As part of this programme, a café and activity area are being considered to provide greater utilisation of the garden, aimed at enhancing the wellbeing of patients, staff and the public. The café is intended to be operational by November 2021.

Looking ahead

The reconfiguration and refurbishment present a significant opportunity for the Trust to evaluate the areas allocated for green space and the integration of green roof, green walls and so called Blue and Green Infrastructure. Options will be evaluated during the design/planning for each Hospital Site.

To help improve both biodiversity and human wellbeing, the Trust will work to promote, establish and safeguard green space within our estate. Providing greenspace and protecting biodiversity can greatly benefit the local environment, by improving air quality and helping remove the carbon emitted, it also has been proven to improve wellbeing.

Actions

- Develop a strategy to protect and enhance the natural environment on our estate with relevant staff and the necessary resources will be allocated to successfully deliver the strategy.
- Undertake an assessment of the effects of the delivery of our services on biodiversity to determine the steps that can be taken to mitigate our impact.
- Work with expert local partners to maintain and improve the greenspaces at our sites to encourage greater biodiversity. The Trust will monitor the success of the implemented greenspace actions carefully by measuring the biodiversity, as well as the impact of greenspace on staff wellbeing.
- Improve of use of resources where possible to reduce our wider impact on biodiversity. Consideration of food contracts updates to improve sustainability credentials and meet government guidelines.

7.6. MEDICINES

Medicines provide a significant opportunity for healthcare to reduce emissions. “Delivering a Net Zero NHS” states that *‘Medicines account for 25% of emissions within the NHS. A small number of medicines account for a large portion of the emissions, and there is already a significant focus on two such groups – anaesthetic gases (2% of emissions) and inhalers (3% of emissions) – where emissions occur at the ‘point of use’. The remaining 20% of emissions are primarily found in the manufacturing and freight inherent in the supply chain’.*

UHL is committed to reducing the use of fluorinated gases used in anaesthetic gases and inhaler propellants and looking for other options to reduce the carbon emissions and sustainability impacts associated with medicines.

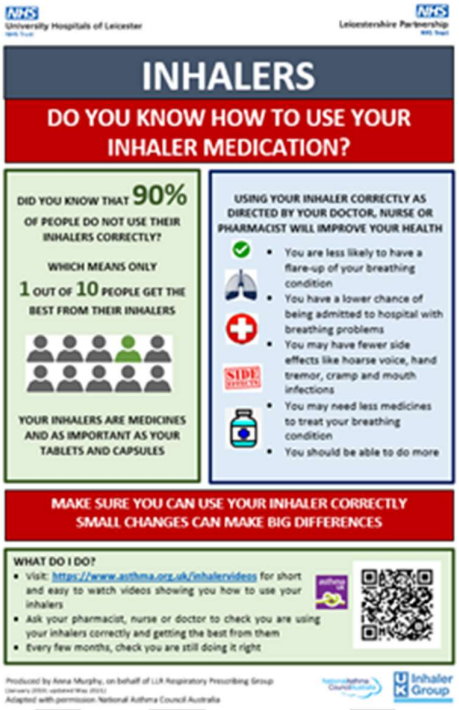
LOW CARBON INHALERS

Key Progress to date

- LLR Inhaler Decision Aid which has been developed to ensure that decisions around inhaler choice consider the patient and the environment
- ICS Task and Finish Group for inhalers established
- Subcommittee of the Leicestershire and Rutland Respiratory Prescribing Group
- UHL is developing a tool to reduce the usage of metered dose inhalers
- Since February 2021 a steering group have been leading on Leicestershire Take AIR – a proof of concept project to encourage inhaler recycling. The Leicestershire Take AIR (Take Action for Inhaler Recycling) scheme will enable to safely and effectively recycle the empty, unwanted or expired inhalers through the post

On-going results from the proof of concept scheme are currently being analysed to ensure cost effectiveness and project success; with engagement ongoing with NHSE&I regarding establishing a national scheme based on these results.

We intend to progress engagement at a local level with UHL and the wider ICS to decide actions for when this proof of concept project finishes (Feb 2022).



Looking ahead:

- Shift to lower carbon inhalers where clinically appropriate (NHS Long Term Plan)
- By the end of 2021, no more than 45% non-salbutamol inhalers prescribed to be metered-dose inhalers, set by the Impact and Investment Fund, with a financial incentive for Primary Care Networks
- Increase in recycling inhalers through Take AIR scheme and/or improved disposal of inhalers via return to community pharmacy service (Community Pharmacy Contractual Framework)
- Improved inhaler technique optimisation through training and education of patients and healthcare professionals;
    - Development of UHL HELM Inhaler training course
    - UHL promotion of Asthma UK Inhaler technique videos
    - Improved medicine reconciliation on admission to include accurate device prescribing and inhaler technique assessment

ANAESTHETIC GASES

Key Progress to date

- UHL have been encouraging the use of alternative surgical anaesthesia options to reduce the use of desflurane, such as switching to lower carbon alternative sevoflurane. The trend shows that the use of desflurane has decreased over the last years, due to efforts from ITAPS staff;

- An anaesthetist has been assigned for desflurane and the project for reducing the consumption is in the scoping stage. The Director of Estates and Facilities, is leading this work across the system;
- UHL have also implemented a cylinder tracking system which should reduce loss / waste / over-ordering of medical gas cylinders through us better knowing where these are located;

Looking ahead:

- Transforming anaesthetic practices (Long Term Plan) and shifting to lower carbon anaesthetic gases. Related targets;
  - The Trust to reduce its use of desflurane in surgery to less than 10% of its total volatile anaesthetic gas use, by volume (As per the 2021/22 NHS Standard Contract)
  - Local systems and providers assessing the potential to reduce unnecessary emissions of nitrous oxide to atmosphere (Operational Planning and Contracting Guidance), which is likely to include:
    - Collecting and sharing best practice of nitrous oxide reduction strategies, including waste and other unnecessary emissions.
    - Preparing to report on the use of nitrous oxide.

PHARMACEUTICALS

Key Progress to date

- UHL Pharmacy Department has created a Sustainability Interest Group to discuss waste and carbon reduction opportunities and increase staff awareness.

Looking ahead:

- UHL to undertake 'NHS Carbon Footprint Plus' to understand the impact of carbon emissions from Medicines and Medical devices
- Take steps to increase staff awareness, training to all staff - 2022
- Clinical plastics: proposals from staff to re-evaluate alternative options for many single-use items, disposable or expired equipment and unused pharmaceuticals, as well as calls for the UHL to consider reusable or refurbish able alternatives
- Research into medicines with low embodied carbon and low carbon delivery – identify priority medicines for review and possible replacement – on-going 2022 to 2025.

LOGISTIC AND STORAGE OF MEDICINES

- Improper storage and control of medicines may lead to waste or inefficacy of the medicines in use. UHL are aware that temperature control can be difficult. and that distribution of controlled medicines requires use of sealed plastic bags for security that are not re-used. We will be

proactive in addressing the storage of medicines to further progress our operational sustainability.

ACTIONS FOR MEDICINES (M)

Action #	Details of Action	Completion Date
M1	UHL to undertake 'NHS Carbon Footprint Plus' to understand the impact of carbon emissions from Medicines and Medical devices;	Jan 2022
M2	By the end of 2021, no more than 45% non-salbutamol inhalers prescribed to be metered-dose inhalers, set by the Impact and Investment Fund, with a financial incentive for Primary Care Networks	Dec 2021
M3	The trust to reduce its use of desflurane in surgery to less than 10% of its total volatile anaesthetic gas use, by volume	2021/22 NHS Standard Contract
M4	Take steps to increase staff awareness, training to all staff	2022
M5	Clinical plastics: proposals from staff to re-evaluate alternative options for many single-use items, disposable or expired equipment and unused pharmaceuticals, as well as calls for the UHL to consider reusable or refurbish able alternatives	2022

7.7. SUPPLY CHAIN AND PROCUREMENT

The NHS is responsible for around 4-5% of the UK's emissions, with over 60% of our total carbon footprint sitting within our supply chain. This includes emissions from freight, the manufacturing of goods, catering, business services and construction, among others.

The decarbonisation of the NHS supply chain is therefore crucial if we are to become net zero by 2045. To meet our commitment, we want to ensure all our suppliers are aligned with this ambition by 2030.[i]

To understand the part that UHL plays in this we first need to understand our own procurement and supply chain carbon impact. To do this UHL proposes to undertake an 'NHS Carbon Footprint Plus' carbon footprint analysis to quantify the emissions in relation to procurement and ensure that Net Zero 2045 road map is planned-ahead.

It is recognised that we cannot do this alone, and as a system we need to work together with our NHS partners and our suppliers; we will align ourselves with national policy and guidance. Notably we will align with the National Procurement Policy Note released in June 2021, for which all contracting authorities should consider the following national priority outcomes alongside any additional local priorities in their procurement activities:

- creating new businesses, new jobs and new skills
- tackling climate change and reducing waste, and
- improving supplier diversity, innovation and resilience

We seek to make the best use of UHL resources for patient care and develop sustainable services for the long term and manage our resources sustainably, reducing our direct environmental impacts across our healthcare services in energy, waste, water, food and anaesthetic gases.

Sustainable resource use can include:

- Using a product with a smaller carbon footprint (e.g. less waste generated, energy/water used, fewer transport emissions, less packaging etc.)
- Using less of a product
- Choosing products with fewer or no hazardous chemicals
- Using locally sourced, fresh, organic and Fairtrade ingredients
- Reducing waste
- Maximising repair and reuse
- Influencing our supply chains and partners to play their part

Over the last year we have made significant steps in improving the sustainability of our catering operations by signing up to the NHS Plastic Pledge and further committing to reduce single-use plastic consumables.

The NHS England and Improvement Board (NHSE/I) set out in September 2021 its framework for working with the supplier market as below:

- From April 2022, the NHS will adopt the Government's 'Taking Account of Carbon Reduction Plans' (PPN 06/21), requiring all suppliers with new contracts for goods, services, and/or works with an anticipated contract value above £5 million per annum, to publish a carbon reduction plan for their direct emissions
- From April 2024, the NHS will expand this requirement for all new contracts, irrespective of value
- From April 2027, all suppliers with contracts for goods, services, and/or works for any value, will be expected to publish a carbon reduction plan that considers the suppliers' direct and indirect emissions
- From April 2028, new requirements will be introduced overseeing the provision of carbon foot-printing for individual products supplied to the NHS. The NHS will work with suppliers and regulators to determine the scope and methodology
- From 2030, suppliers will only be able to qualify for NHS contracts if they can demonstrate their progress through published progress reports and continued carbon emissions reporting through the supplier framework
- A supplier framework for benchmarking and reporting progress against these requirements will be available in 2022. We will continue to work closely with suppliers to refine the scope and methodology of our asks, ensure it aligns with international best practice, and to regularly assure the quality and accuracy of supplier responses

This approach builds on UK Government procurement policy. In addition to PPN 06/21, we will adopt the Government's Social Value Model (PPN 06/20), where all NHS tenders must include a minimum of 10% scoring criteria in all procurements to assess how suppliers will contribute.

The above sets out the national agenda, and to support this we require investment in a Sustainable Procurement Lead at either a Trust level or ICS Level to give this the attention that it both needs and deserves.

UHL Procurement is currently in conversation with large suppliers and looking to the opportunities to reduce carbon emissions and waste from the supply chain and procurement.

UHL will put in place a plan which supports the national and local agenda over the next 3 years. There are however, things that UHL has already made progress on and some things that we are currently working on as outlined below.

Progress to date

- Annual Plastic return records
- Behavioural change
- Waste contracts under review

- More local suppliers
- Net Zero Carbon for white goods
- Value Based Procurement which includes a reduction of waste
- Enabling conversations on sustainability in our Best Value Groups

Looking ahead

- Secure funding for the recruitment of a Sustainable Procurement Lead, to deliver and champion the changes required in our net carbon zero journeys by April 2022
- By the first half of 2022, UHL to undertake 'NHS Carbon Footprint Plus' carbon footprint to quantify the emissions in relation to procurement and ensure that Net Zero 2045 road map is planned-ahead
- Develop a road map to embedding sustainability and carbon reduction in decision-making
- Conducting life cycle assessment and evaluation of high-volume products, most notably single-use products
- Pooling NHS purchasing power to enable sustainable procurement of goods and services
- Review the "Last mile" of deliveries to reduce traffic to sites and potential for off-site consolidation of supplies

It will be important once we understand the extent and contributors to UHL's Carbon Footprint Plus to define a priority list of for sustainable procurement to include products with lower embodied carbon (product and transport), lower carbon emissions in use and with waste reduction potential.

In summary, we aim to embed sustainability management into our decision-making processes and our contracts (i.e. currently waste contracts – targeting tangible actions from the start and throughout contracts. It is recognised that if by embedding sustainable and low carbon outcomes into long term contracts, and by monitoring progress, that UHL will be able to ensure the transition towards net zero as well as a retrospective review of our existing longer-term contracts (5 year+) to ensure that sustainability is embedded and opportunities for delivering net zero carbon are integrated.

Action #	Details of Action	Completion Date
P1	Procurement representation at the LLR ICS Green Board	January 2022
P2	Adopt the Government's Social Value Model (PPN 06/20)	March 2022
P3	Secure funding for the recruitment of a Sustainable Procurement Lead (at Trust or ICS Level).	April 2022
P4	Sustainable Procurement Working Group established	May 2022
P5	UHL to undertake 'NHS Carbon Footprint Plus' to understand the impact of carbon emissions within procurement and supply chain.	June 2022

P6	Developed a road map to embedding sustainability and carbon reduction in decision-making	September 2022
P7	Review the training and development requirements with regards Sustainable Procurement awareness across the Trust.	September 2022
P8	Developed a 2023 Annual Procurement Carbon Reduction Schemes plan of carbon reduction schemes (product and transport) arising from use, and waste reduction potential.	September 2022
P9	Developed the Business case to review the carbon reduction of "last mile" deliveries to the Trust.	September 2022
P10	Review progress against the 2023 Annual Procurement Carbon Reduction Schemes	Quarterly in 2023
P11	Finalise the 2024 Annual Procurement Carbon Reduction Schemes	September 2023
P12	Review progress against the 2024 Annual Procurement Carbon Reduction Schemes	Quarterly in 2024

[i] Roadmap for NHS suppliers to reach net zero by 2045 letter 30 September 2021.

7.8. FOOD AND NUTRITION

UHL Caters for approximately 13,000 patients, serving 3 meals and around 7 cups of water a day per patient; resulting in significant consumption and waste generation both from food and beverages and from primary and transport packaging, including a high volume of single use plastics.

Over the last two years, we have made significant steps in improving the sustainability of patient catering by:

- Patient Catering - Replacing disposable plastic cups with Crockery/Ceramic Mugs on all Wards that have dishwashers, which will be 50%+ of all Wards moving to all Wards as Dishwashers are installed, there will be a minimal need for Plastic/Paper cups.
- Using UK suppliers, that are local to UHL (where possible) provides opportunity to reduce our wider supply chain carbon footprint

UHL have made significant steps in improving the sustainability of retail catering operations by replacing all takeaway containers with an alternative product with a smaller carbon footprint and committing to reduce single-use plastic consumables.

Key steps

- Polystyrene lunch boxes replaced by cardboard lunch boxes
- Eliminated plastic stirrers & straws in UHL's outlets
- Reviewing options to replace plastic cutlery by wooden cutlery

We have begun switching packaging and catering items throughout retail outlets. These will be reviewed in terms of product quality, environmental performance and cost effectiveness to achieve a balanced and sustainable outcome, helping UHL fulfil its net zero carbon commitments. Products under review include food boxes, bags, plates, napkins and cups.

Looking ahead

- UHL to undertake 'NHS Carbon Footprint Plus' to understand the contribution of carbon emissions from Food and Catering to UHL's overall footprint

SINGLE-USE PLASTICS

UHL have made significant steps in improving the sustainability of our catering operations by signing a NHS Single-Use Plastics Reduction Campaign Pledge to support the reduction of the amount of plastic waste in UHL.

Progress to date

- Signed up to the NHS Single-Use Plastics Reduction Campaign Pledge for the reduction of the amount of plastic waste
- Replaced the polystyrene lunch boxes by cardboard lunch boxes in Retail;
- Eliminated plastic stirrers & straws in UHL's outlets;
- Replaced the disposable cups by paper cups and crockery cups in patient catering;
- Used locally sourced UK suppliers, where possible.

Looking ahead

- UHL to eliminate further plastic items;
- Review waste contract for retail to improve the recycling rates.
- Use our influence across the supply chain working with national partners and the system to reduce further the single-use plastic consumables.

- To explore further opportunities to reduce plastic in packaged food items
- Review means to encourage healthy and sustainable food and drink choices
- Review opportunities for use of Reverse Vending Machines (RVM's) that offer a range of dynamic initiatives/incentives to encourage recycling
- Reviewing the waste contract for retail and catering with focus on enhancement of waste reduction and improved levels of recycling
- Further work to be undertaken on sustainable menu design – including focus on healthy and low carbon/sustainable meal options and in this way, reduce embodied and transport carbon footprint

Action #	Details of Action	Completion Date
FN1	Adopt the Government's Social Value Model (PPN 06/20)	March 2022
FN2	Work with Sustainable Procurement Lead (at Trust or ICS Level) to Focus on catering and retail suppliers and low carbon goals.	April 2022
FN3	Sustainable Procurement Working Group established – focus stream on Food and Nutrition and Packaging.	May 2022
FN4	UHL to undertake 'NHS Carbon Footprint Plus' to understand the impact of carbon emissions within procurement and supply chain related to Food and Nutrition	June 2022
FN 5	Improve waste segregation and recycling and part of new waste contracts – monitor progress annually.	2022-2024

7.9. ADAPTATION

Climate Change Risk and Adaption

Climate change poses a major threat to our health as well as our planet. Our Green Plan addresses the Trusts actions to move towards NZC emissions as part of our response to the NHS sustainability targets, including the aim to be the world's first net zero national service, and play a key role in helping to mitigate the impact of Climate Change in line with the UK government pathway towards net zero carbon by 2050.

This section of the Plan addresses actions required of the Trust to ensure we understand the implications of climate change and attendant risks, and that the Trust is well prepared for the future and has resilient systems and processes to ensure delivery of healthcare to the highest standards in the face of extreme weather events or health impacts arising consequently to climate change.

The risks associated with climate change are broad and at high level have been set out in the UK Climate Change Risk Assessment 2017. Risk to health is identified as a high current and future risk in particular because of temperature increases and increase in the frequency and extent of heatwaves.

Preparing and responding to these risks appropriately fall under two areas: Mitigation and Adaptation. The former is taking steps to reduce greenhouse gas emissions to stay off more severe climate impacts. The latter is the operational changes required to ensure resilience in the face of impacts brought about by anticipated climate change and addressed briefly here.

UHL has undertaken a first review of Climate Change impacts and risks to the Trust and set these out in a separate Climate Adaptation Plan. The plan details the review of risks that led to the development of a Climate Change Risk Register and an overall risk assessment of Climate Change, and the adaptation steps required. These risks will be integrated into the Trust's Corporate Risk Register.

The Climate Change Risk Assessment set out the Trust's understanding that, if there is a progression of climate change over the coming decades, then the thresholds for action and health care demands will change. This required an understanding that the risk of climate change is compound in nature impacting; cold weather, heatwave, loss of premises, loss of staff, health care demands and other plans across UHL.

The potential for multiple concurrent events driven by climate change has the potential to increase consequences e.g., a heatwave concurrent with high pollen counts and/or high ground level ozone pollution and high fine air pollutants (PM10 and PM2.5), has potential for higher demand for patient care that may coincide with times where premises or staffing are also under pressure.

There are broad climate risks, which can be viewed individually or in concert considering the potential for synergistic impacts. Some risks are transient or acute in nature such as extreme weather events (that may occur at any time such as floods, wind, ice/hail or electrical storms etc), while others are longer term and may lead to chronic impacts such as increased skin cancer risk due to warmer summers and clearer skies and increased UVB exposure, increase in the vectors of disease (e.g. mosquitos and Zica virus, Ticks and Lymes disease etc).

Climate change may shift the boundaries for action by increasing the frequency, duration or extent of impact. It may also lead to risks occurring in concert that may individually be low or moderate in consequence, but collectively lead to disruption of services.

Increase in the extremity of weather events driven by on-going climate change may lead to unexpected events at any time that test the resilience of existing systems. These can include both the Trust estate and the wider healthcare infrastructure across the county and beyond.

By setting out a process for assessing risks, and to review them regularly (as key information emerges about climatic changes*) – UHL will ensure that its operations remain resilient for the long term, and we continue to provide quality of health care to the highest standards.

Our key actions and adaptation plan in relation to Climate Change Adaption (CCA) include:

Action #	Details of Action	Completion Date
CCA 1	Review and sign off, of a climate change risk assessment, and adaptation plan	March 2022
CCA 2	Integration of key risks into UHL Central risk register	March 2022
CCA 3	Definition of ownership of the overall risk assessment process and implementation of actions	March 2022
CCA 4	Keep emerging risks and latest data in view and review key reports as expected to be published by the Government in June 2022 – Update Adaptation Plan	October 2022

**We will take account of emerging information on climate change impacts and take steps required to adapt to climate change. UHL is aware that adaptation to temperature increase has been defined as an on-going risk at high level in the recently published independent report (CCRA3 - see Figure 1 – copied from the report key findings, below) by the Climate Change Committee. This report has been published in advance of the Government's formal 3rd Climate Change Risk Assessment for the UK (expected June 2022). We are currently reviewing the independent report and the sector briefing for the healthcare sector and will respond to recommendations in an appropriate/robust/proactive manner.*

7.10. UHL 'NHS CARBON FOOTPRINT'

This section shows how the UHL NHS Carbon Footprint carbon emissions performance from 2017/18 to 2020/21 has reduced (see Figure 3) and analyses how the Trust is progressing against commitments to tackle the Net Zero targets.

UHL NHS Carbon Footprint Scope emissions (tonnes CO_2e)	2012/13 (Baseline)	2017/18	2018/19	2019/20	2020/21
Scope 1	23,806	28,428	28,857	28,681	25,856
Scope 2	20,172	11,132	8,892	9,951	7,728
Scope 3	11,876	10,375	9,205	9,349	7,584
Total Scope 1, 2 & 3	**55,854**	**49,935**	**46,954**	**47,981**	**41,168**

Figure 3

NHS have committed to leading the public sector in this area and have set interim reduction targets. For the emissions NHS control directly (the NHS Carbon Footprint), will reach net zero by 2040, with an ambition to reach an 80% reduction by 2028 to 2032 against the 1990 levels. As accurate baseline data is not available for 1990, UHL has adopted the Sustainable Development Unit recommended alternative of a 28% reduction from the 2012/13 baseline data by 2020 which equates to 34% reduction target from 1990 according to NHS Sustainable Development Unit (SDU).

The UHL NHS Carbon Footprint summary shows that based on the estimated 2012/13 baseline, a reduction of 26.29% has been achieved by 2020/21, missing the target of 28% by around 953 tonnes CO2e. However, due the target is anticipated to be achieved by 2022 due to electricity now procured from REGO-backed renewable power as of 1st April 2021. We are aware that the UHL Estate will change considerably due to Reconfiguration compared to the estate which generated the 2012/13 baseline and will consider this within our carbon footprint analysis.

Background

As part of the 2017 SDMP report, UHL carried out the utility carbon footprint exercise for the emissions from gas and grid electricity with the objective for a 28% reduction in direct CO2 emissions to our 2012/13 baseline by 2020.

2017 SDMP utility calculations showed that this was deemed to be achievable with a 3% reduction target of our 2018/19 emissions. The target was missed by 0.49% (330 tonnes) in 2018/19 but achieved in 2021 [11].

Description	Gas	Grid Electricity	Totals	Cost	CO_2 Emissions	CO_2 Emissions
Year	Usage (KWh)	Usage (KWh)	(KWh)	Costs (£)	(Tonnes)	(CRC Cost)
2006/07	116,873,611	29,357,222	146,230,833	£5,252,319	37,531	N/A
2007/08	99,831,667	30,681,111	130,512,778	£4,403,428	35,090	N/A
2008/09	109,781,944	33,822,222	143,604,167	£7,320,137	38,633	N/A
2009/10	93,697,272	36,426,819	130,124,091	£5,136,734	36,910	N/A
2010/11	96,694,476	39,489,130	136,183,606	£5,282,765	39,236	N/A
2011/12	85,673,210	42,535,080	128,208,289	£6,479,603	38,881	£376,571
2012/13	86,601,762	46,390,022	132,991,784	£7,223,638	41,334	£404,539
2013/14	83,164,032	48,522,097	131,686,129	£7,995,022	40,724	£400,777
2014/15	92,086,201	38,205,678	130,291,879	£7,072,683	36,950	£281,979
2015/16	101,496,587	32,832,008	134,328,594	£6,390,731	36,138	£291,598
2016/17	110,655,067	29,972,229	140,627,296	£5,485,501	33,707	£281,694
2017/18	111,562,261	31,665,782	143,228,042	£6,344,521	32,567	£313,497
2018/19	113,913,099	31,581,628	145,494,728	£7,108,306	30,543	£297,372
2019/20	111,965,064	34,005,463	145,970,527	£8,345,770	30,014	N/A
2020/21	**107,293,138**	**33,352,571**	**140,645,709**	**£7,657,842**	**28,173**	**N/A**
2021/22 3%	104,074,344	32,351,993	136,426,337	£8,117,313	27,327	N/A
Annual Change	4,671,926	652,892	5,324,819	£687,928	1,842	N/A
% age change	4.17%	1.92%	3.65%	8.24%	6.14%	N/A
2012/13 Change	-20,691,376	13,037,451	-7,653,925	-£434,204	13,161	N/A
% age change	-23.89%	28.10%	-5.76%	-6.01%	31.84%	N/A

Methodology

UHL have now undertaken 'NHS Carbon footprint' calculations for 2017/18 to 2020/21 to align with the new NHS guidance.

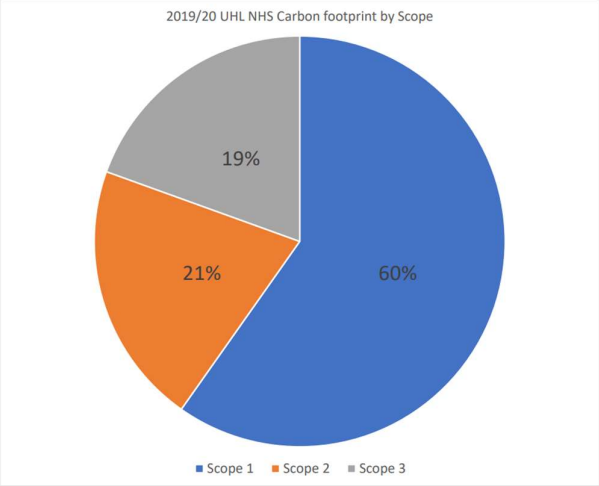
Data has been collected from UHL specialist departments and Estates Returned Information Collection (ERIC). Reporting structure guidance has been obtained from the SDU, Public Health and Defra.

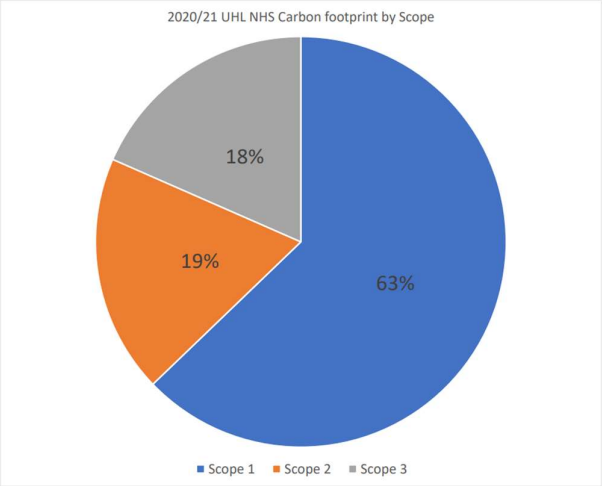
There are areas which are lacking sufficient data for inclusion that will be addressed and incorporated in future reporting. For refrigerant gases, the Trust recognises that they are a powerful greenhouse gas. EU reports state a possible 23,000 times more warming potency than carbon dioxide depending on the type of fluorinated gas (F-Gas) in use. For refrigerant gases, our calculations are based on the estimation approach using the Screening Method.

All calculations refer to UHL's carbon footprint which is aligned to the NHS Carbon Footprint. We are aware that the NHS Carbon Footprint Plus requires datasets that we do not currently have access to or are deemed to be incomplete/estimated. We will work towards generating both NHS Carbon Footprint and Carbon Footprint Plus calculations going forward.

The UHL NHS Carbon Footprint summary shows that based on the estimated 2012/13 baseline, a reduction of 26.29% has been achieved by 2020/21 which equates to c. 32% reduction over the 1990 baseline based on SDU NHS Carbon reduction strategy. Therefore, for UHL to achieve the NHS Carbon Footprint Net Zero target, an additional c.48% reduction would be required in the next 10 years (by 2028-32) from a 2020/21 emissions.

The summary of the UHL 'NHS Carbon Footprint' for year 2020/21 shows 41,168 tCO2e, therefore, an overall reduction of approx. 48% of carbon emissions would equate to 21,407 tCO2e by 2028-32.



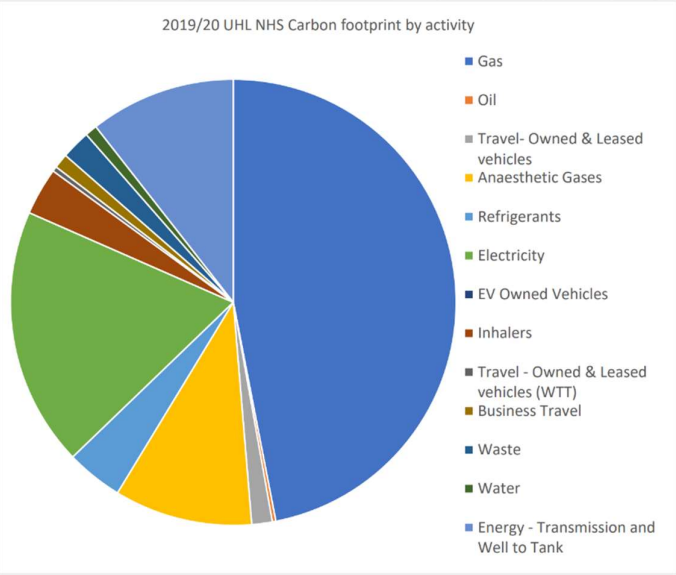


Scope 1: Fossil fuels, UHL facilities, Anaesthetics, NHS Fleet & Leased vehicles	28,681 tonnes CO_2e
Scope 2: Electricity	9,951 tonnes CO_2e
Scope 3: Energy (Well to tank), Business Travel, Waste, Water, Metered dose inhalers	9,346 tonnes CO2e

Scope 1: Fossil fuels, UHL facilities, Anaesthetics, NHS Fleet & Leased vehicles	25,856 tonnes CO_2e
Scope 2: Electricity	7,728 tonnes CO_2e
Scope 3: Energy (Well to tank), Business Travel, Waste, Water, Metered dose inhalers	7,593 tonnes CO2e

For year 2019/20 the main emission impact category is Gas (+WTT) which accounts for almost half of all emissions, followed by Electricity (+WTT) with over a quarter of emissions. The remaining carbon footprint is made up of (in descending order) anaesthetic gases, inhalers, refrigerants, waste, owned & leased vehicles and business travel.

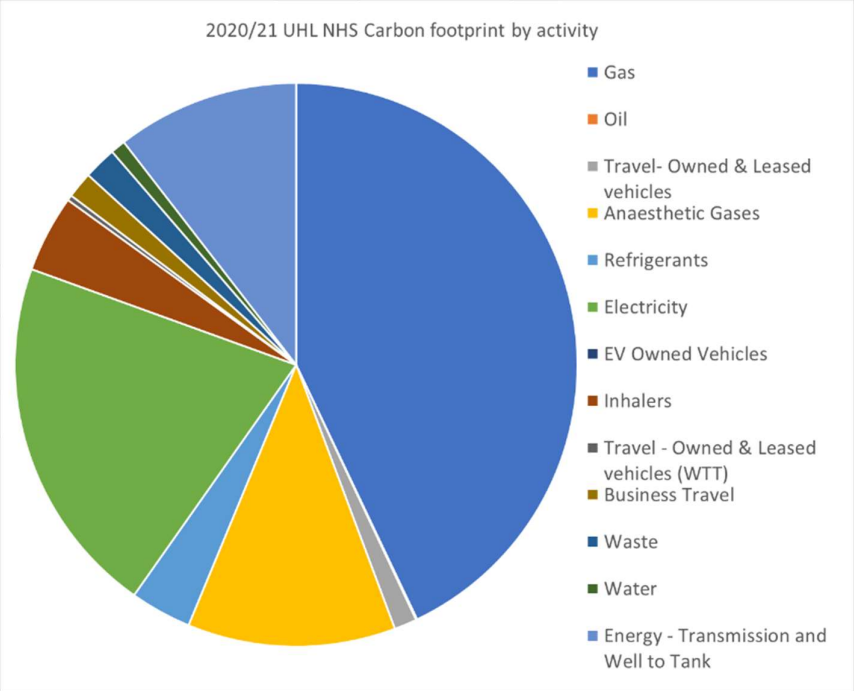
Full details are shown in Appendix A of this report.



UHL NHS Carbon Footprint Scope emissions	2019/20 Carbon Emissions (tCO2e)	
Gas (+WTT)	23,275	48.51%
Electricity (+WTT)	12,301	25.64%
Anaesthetic gases	5,736	11.95%
Inhaler	2,124	4.43%
Refrigerants	1,692	3.53%
Waste	904	1.88%
Owned & Leased vehicles (+WTT)	773	1.61%
Business Travel (+WTT)	723	1.51%
Water	411	0.86%
Oil (+WTT)	40	0.08%
	47,978	**100.00%**

For year 2020/21 the main emission impact category is Gas (+WTT) which accounts for 53.03%, followed by Electricity (+WTT) with 23.19% of emissions. As per the previous year, the remaining carbon footprint is made up of (in descending order) anaesthetic gases, inhalers, refrigerants, waste, owned & leased vehicles and business travel with reductions across all apart from waste and travel emissions.

UHL NHS Carbon Footprint Scope Emissions	2020/21 Carbon Emissions (tCO2e)	
Gas (+WTT)	21,837	53.04%
Electricity (+WTT)	9,551	23.20%
Anaesthetic Gases	4,123	10.02%
Refrigerants	1,692	4.11%
Inhalers	1,415	3.44%
Waste	867	2.11%
Owned & Leased vehicles (+WTT)	762	1.85%
Business Travel (+WTT)	435	1.06%
Water	361	0.88%
Oil	125	0.30%
	41,168	100.00%



UHL NHS CARBON FOOTPRINT

Overall Progress

CO_2 Emissions (tCO_2e)	CO_2 Emissions (tCO_2e)	2012/13	2017/18	2018/19	2019/20	2020/21
	Total	**55,854**	**49,934**	**46,955**	**47,980**	**41,168**
	Scope 1	23,806	28,428	28,857	28,681	25,856
	Scope 2	20,172	11,132	8,892	9,951	7,728
	Scope 3	11,876	10,375	9,205	9,349	7,584

Scope 1 - Direct

CO_2 Emissions (tCO_2e)		2012/13	2017/18	2018/19	2019/20	2020/21
Scope 1 - Direct	Total	23,806	28,428	28,857	28,681	25,856
Owned buildings	Gas	16,426	20,545	20,955	20,597	19,324
	Oil	61	104	28	33	105
Travel	Travel- Owned & Leased vehicles	711	648	636	623	612
Fugitive emissions	Anaesthetic Gases	4,916	5,438	5,546	5,736	4,123
	Refrigerants	1,692	1,692	1,692	1,692	1,692

*

Scope 2 - Indirect

	CO_2 Emissions (tCO_2e)	2012/13	2017/18	2018/19	2019/20	2020/21
Scope 2 - Indirect	Total	20,172	11,132	8,892	9,951	7,728
Owned buildings	Electricity	20,172	11,132	8,892	9,951	7,728
Travel	EV Owned Vehicles	0	0	0	0	0

Scope 3 - Indirect

CO_2 Emissions (tCO_2e)		2012/13	2017/18	2018/19	2019/20	2020/21
Scope 3 - Indirect	Total	11,876	10,375	9,205	9,349	7,584
	Inhalers	1707	1988	2,054	2,124	1,415
	Travel - Owned & Leased vehicles (WTT)	172	156	153	149	150
	Business Travel	1334	908	836	723	435
	Waste	1043	733	689	907	867
	Water	260	478	366	411	361
	Energy - Transmission and Well to Tank	7,360	6,112	5,107	5,036	4,356

Scope 3 -Breakdown

	CO_2 Emissions (tCO_2e)	2012/13	2017/18	2018/19	2019/20	2020/21
	Total - Energy Transmission and well to tank	7,360	6,112	5,107	5,036	4,356
Energy - Transmission and Well to Tank	Gas	2,492	3,107	2,913	2,679	2,513
	Oil	10	23	5	6	20
	Electricity	4,858	2,982	2,189	2,351	1,823

	CO_2 Emissions (tCO_2e)	2012/13	2017/18	2018/19	2019/20	2020/21
Scope 3 - Travel	Total	905	908	836	723	435
Business Travel	Business Mileage - Grey Fleet (+ WTT)	453	453	453	391	207
	Rail (+ WTT)	89	89	33	25	25
	Taxi (+ WTT)	0.0	0.0	0.1	0.2	0.1
	Bus (+ WTT)	102	203	203	203	203
	Air (+ WTT)	260.90	162	146	102	0

	CO_2 Emissions (tCO_2e)	2012/13	2017/18	2018/19	2019/20	2020/21
Scope 3 - Water & Sanitation	Total	260	478	366	411	361
Water	Water Use	85	156	120	134	118
	Water Treatment	175	322	246	276	243

	CO_2 Emissions (tCO_2e)	2012/13	2017/18	2018/19	2019/20	2020/21
Scope 3 - Waste	Total	1,043	733	689	907	867
	Alternative Treatment (clinical waste)	66	444	443	449	490
	Incineration (clinical waste)	395	71	71	72	60
	Incineration (Domestic waste)	541	173	133	358	295
	Domestic Waste (Recycled)	31	35	34	19	14
	Landfill disposal waste	10	10	9	9	8
	Waste Electrical and Electronic Equipment (WEEE)	1	0.00	0.1	0.36	0.00

Projected scenario

Projected scenario assumptions have been modelled for years 2022-25 within the Green Plan timeline. The following carbon emission reductions are expected in the next 3-5 years based on the following assumptions:

- UHL have confirmed that since 1st April 2021, the electricity will be procured by REGO-backed renewable power. Green electricity purchase through standard REGOs is a first step along the pathway to zero carbon. Electricity related emissions will account zero going forward;
- It has been assumed that desflurane will be reduced to less than 10% of its total volatile anaesthetic gas by mid 2022, and the emissions to be reduced 10% each year going forward. Reduction of Nitrous oxide to be further explored;
- It has been assumed that Inhalers <45% non-salbutamol inhalers prescribed to be metered-dose inhalers, and inhalers emissions to be reduced 10% each year going forward;
- It has been assumed that Business travel car mileage will be reduced due to reduced mileage as a result of working from home and introduction of EV vehicles every year;
- The Hopper Bus was converted to electric September 2021 and emissions derived from bus transport are eliminated;
- Coupled with a domestic flight ban, it is assumed that there will be a 10% reduction in emissions each year going forwards in air travel for business;
- It has been assumed that gas consumption will increase around 5% each year.

The projected scenario shows that the overall carbon emissions in 2024-25 would be estimated 33,534tCO2e, which represents a carbon reduction of approx. 40% compared to 2012/13 baseline, which equates to 48% against the 1990 baseline based on NHS SDU targets. By 2025, Gas would represent around 80% of the UHL NHS Carbon Footprint emissions. However, there will be a large drop when the existing CHP are switched off and the CO2 emissions will be reduced as due to the transfer to green electricity.

Note

The Green Plan has identified that 0% landfill was inaccurate, and UHL will investigate the accuracy of the landfill data going forward. By using the currently supplied value of 5% to landfill UHL is making sure that the landfill data is not under-reported and will be refined going forward.

UHL NHS CARBON FOOTPRINT

Overall Progress

CO_2 Emissions (tCO_2e)	CO_2 Emissions (tCO_2e)	2012/13	2017/18	2018/19	2019/20	2020/21	Projected 2021/22	2022/23	2023/24	2024/25
	Total	**55,854**	**49,934**	**46,955**	**47,980**	**41,168**	31,418	32,003	32,709	33,526
	Scope 1	23,806	28,428	28,857	28,681	25,856	26,390	26,984	27,671	28,450
	Scope 2	20,172	11,132	8,892	9,951	7,728	0	0	0	0
	Scope 3	11,876	10,375	9,205	9,349	7,584	5,028	5,020	5,038	5,075

Scope 1 - Direct

CO_2 Emissions (tCO_2e)		2012/13	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Scope 1 - Direct	Total	23,806	28,428	28,857	28,681	25,856	26,390	26,984	27,671	28,450
Owned buildings	Gas	16,426	20,545	20,955	20,597	19,324	20,290	21,305	22,370	23,489
	Oil	61	104	28	33	105	131	137	144	151
Travel	Travel- Owned & Leased vehicles	711	648	636	623	612	550	496	446	402
Fugitive emissions	Anaesthetic Gases	4,916	5,438	5,546	5,736	4,123	3,727	3,354	3,019	2,717
	Refrigerants	1,692	1,692	1,692	1,692	1,692	1,692	1,692	1,692	1,692

*

Scope 2 - Indirect

	CO_2 Emissions (tCO_2e)	2012/13	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Scope 2 - Indirect	Total	20,172	11,132	8,892	9,951	7,728	0	0	0	0
Owned buildings	Electricity	20,172	11,132	8,892	9,951	7,728	0	0	0	0
Travel	EV Owned Vehicles	0	0	0	0	0	0	0	0	0

Scope 3 - Indirect

CO_2 Emissions (tCO_2e)		2012/13	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Scope 3 - Indirect	Total	11,876	10,375	9,205	9,349	7,584	5,028	5,020	5,038	5,075
	Inhalers	1707	1988	2,054	2,124	1,415	727	654	589	530
	Travel - Owned & Leased vehicles (WTT)	172	156	153	149	150	135	121	109	98
	Business Travel	1334	908	836	723	435	298	268	241	217
	Waste	1043	733	689	907	867	824	783	744	706
	Water	260	478	366	411	361	385	401	423	445
	Energy - Transmission and Well to Tank	7,360	6,112	5,107	5,036	4,356	2,659	2,792	2,932	3,079

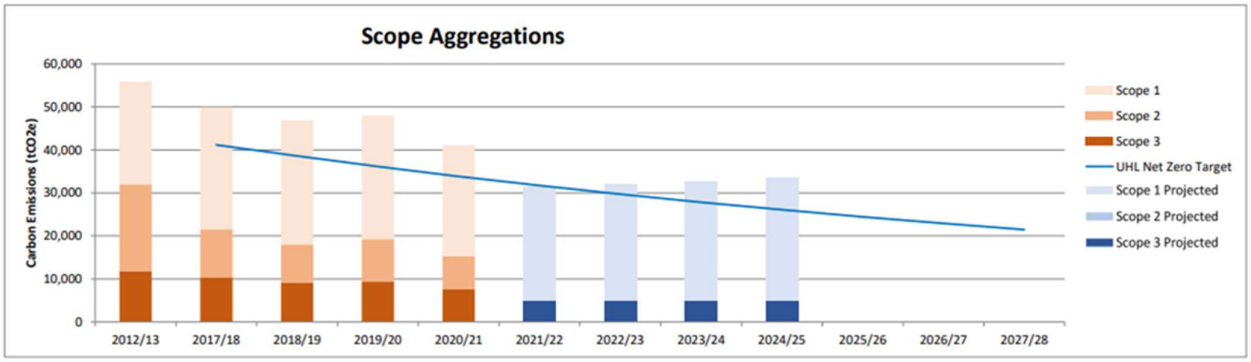
Scope 3 -Breakdown

	CO_2 Emissions (tCO_2e)	2012/13	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
	Total - Energy Transmission and well to tank	7,360	6,112	5,107	5,036	4,356	2,659	2,792	2,932	3,079
Energy - Transmission and Well to Tank	Gas	2,492	3,107	2,913	2,679	2,513	2,639	2,770	2,909	3,054
	Oil	10	23	5	6	20	21	22	23	24
	Electricity	4,858	2,982	2,189	2,351	1,823	0	0	0	0

	CO_2 Emissions (tCO_2e)	2012/13	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Scope 3 - Travel	Total	905	908	836	723	435	298	267.75	241.24	217.22
Business Travel	Business Mileage - Grey Fleet (+ WTT)	453	453	453	391	207	185	167	150	135
	Rail (+ WTT)	89	89	33	25	25	25	23	20	18
	Taxi (+ WTT)	0.0	0.0	0.1	0.2	0.1	0.2	0.2	0.2	0.1
	Bus (+ WTT)	102	203	203	203	203	0	0	0	0
	Air (+ WTT)	260.90	162	146	102	0	87	78	70	63

	CO_2 Emissions (tCO_2e)	2012/13	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Scope 3 - Water & Sanitation	Total	260	478	366	411	361	385	401	423	445
Water	Water Use	85	156	120	134	118	130	134	142	150
	Water Treatment	175	322	246	276	243	255	267	281	295

	CO_2 Emissions (tCO_2e)	2012/13	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Scope 3 - Waste	Total	1,043	733	689	907	867	824	783	744	706
	Alternative Treatment (clinical waste)	66	444	443	449	490	466	442	420	399
	Incineration (clinical waste)	395	71	71	72	60	57	54	52	49
	Incineration (Domestic waste)	541	173	133	358	295	280	266	253	240
	Domestic Waste (Recycled)	31	35	34	19	14	13	13	12	11
	Landfill disposal waste	10	10	9	9	8	8	7	7	7
	Waste Electrical and Electronic Equipment (WEEE)	1	0.00	0.1	0.36	0.00	0	0	0	0


Scope Aggregations
Carbon Emissions (tCO2e)
60,000
50,000
40,000
30,000
20,000
10,000
0
2012/13
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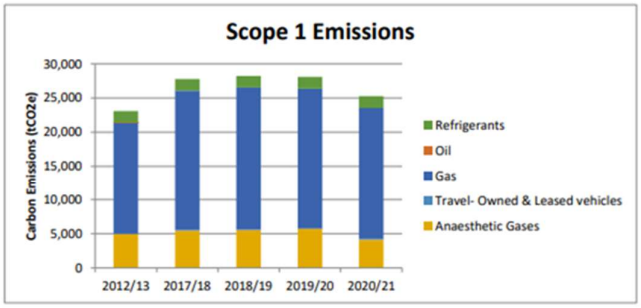
2018/19
2019/20
2020/21
2021/22
2022/23
2023/24
2024/25
2025/26
2026/27
2027/28
Scope 1
Scope 2
Scope 3
UHL Net Zero Target
Scope 1 Projected
Scope 2 Projected
Scope 3 Projected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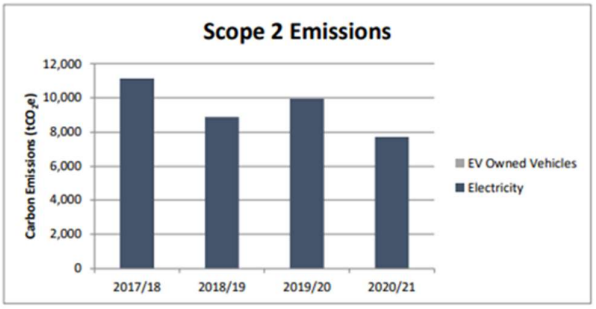
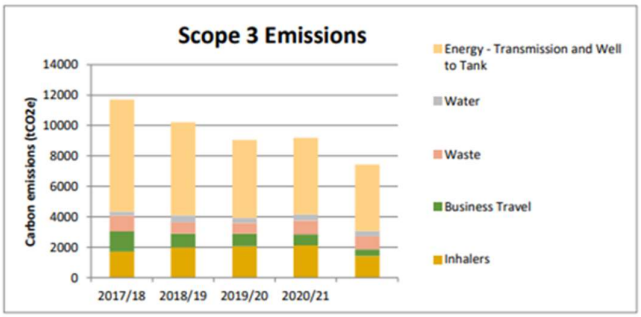
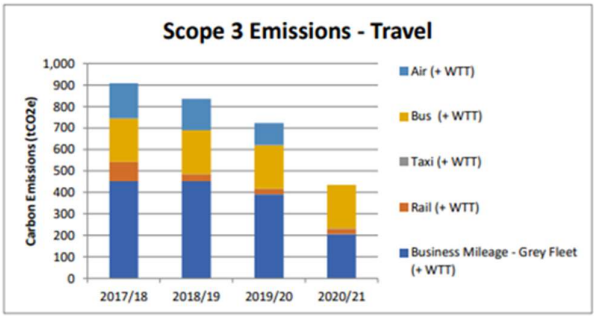
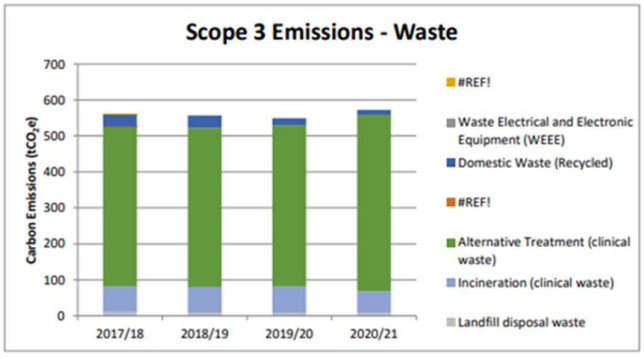
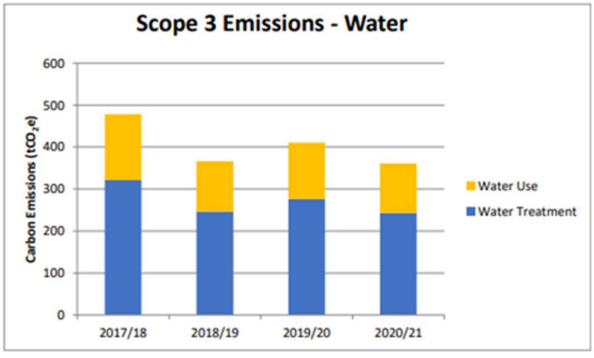
Carbon Emissions (tCO2e)
30,000
25,000
20,000
15,000
10,000
5,000
0
2012/13
2017/18
2018/19
2019/20
2020/21
Refrigerants
Oil
Gas
Travel- Owned & Leased vehicles
Anaesthetic Gases


Scope 2 Emissions
Carbon Emissions (tCO2e)
12,000
10,000
8,000
6,000
4,000
2,000
0
2017/18
2018/19
2019/20
2020/21
EV Owned Vehicles
Electricity


Scope 3 Emissions
Carbon emissions (tCO2e)
14000
12000
10000
8000
6000
4000
2000
0
2017/18
2018/19
2019/20
2020/21
Energy - Transmission and Well to Tank
Water
Waste
Business Travel
Inhalers


Scope 3 Emissions - Travel
Carbon Emissions (tCO2e)
1,000
900
800
700
600
500
400
300
200
100
0
2017/18
2018/19
2019/20
2020/21
Air (+ WTT)
Bus (+ WTT)
Taxi (+ WTT)
Rail (+ WTT)
Business Mileage - Grey Fleet (+ WTT)


Scope 3 Emissions - Waste
Carbon Emissions (tCO2e)
700
600
500
400
300
200
100
0
2017/18
2018/19
2019/20
2020/21
#REF!
Waste Electrical and Electronic Equipment (WEEE)
Domestic Waste (Recycled)
#REF!
Alternative Treatment (clinical waste)
Incineration (clinical waste)
Landfill disposal waste


Scope 3 Emissions - Water
Carbon Emissions (tCO2e)
600
500
400
300
200
100
0
2017/18
2018/19
2019/20
2020/21
Water Use
Water Treatment

Looking ahead

- UHL will need to undertake 'NHS Carbon Footprint Plus' carbon footprint by early 2022, as the impact of the extended scope of the Scope 3 emissions can be quite significant.
- Commission the production of a plan to identify the route we need to take to reach our NHS carbon footprint goal and Net Zero target by 2045, the priorities, opportunities and risks.
    - New-build projects as part of the reconfiguration programme to be designed to be NZC.
    - Refurbishment projects to achieve highest BREEAM standard rating achievable.
    - Existing buildings to be upgraded the highest achievable standard and energy efficiency
- Appoint a Head of Sustainability to address carbon emission reduction. Assign accountability for each significant area of emissions to ensure monitoring and mitigation of each source.
- Consider setting Science Based Targets and utilising carbon offsets to meet the broader Net Zero NHS commitment
- Integrate the Energy and Infrastructure strategy with the Green Plan to inform the delivery of a Trust-wide Net Zero commitment
- Complete a Trust-wide waste audit to enhance waste management practices across the trust, leveraging existing recommendations from previous waste audits.

8. COMMUNICATING THE GREEN PLAN AND REPORTING PROGRESS

The Trust completes the following statutory annual reports related to the Green Plan:

- UHL - Annual Report
- Premises Assurance Model Report
- Estates Return Information Collection (key sustainability data)
- UK – Emissions Trading Scheme (formerly the EU-ETS and CRC)
- Combined Heat & Power Quality Assurance (CHPQA)
- Medium Combustion Plant Directive (MCPD)
- Display Energy Certificates

The progress against the Green Plan will be integrated into the UHL Annual Report, along with the key information related to progress in NHS and other statutory reporting. The adoption of a utility management system will assist this process from April 2022.

The overall aim will be to increase the visibility of key targets and ensure the Trust delivers on its commitments and that adequate resources are allocated to ensure effective implementation of the Green Plan.

Key performance measures will be communicated both internally and externally in accordance with our communication plans as set out in the following section of the report.

For consideration key reports moving forward to include:

- Sustainability Board Reporting requirements to be defined (frequency and content)
- Internal and external audit reports
- Performance monitoring report - annual review
- Annual Green Plan update and reporting
- Social Value reporting
- Recommendations of remedial actions, resource requirements and amendments to accountabilities etc

Internal Actions

- Map out the data collection requirements for each of the focus areas, at what interval the data should be reported on, and who is responsible for this process.
- Establish a baseline for each of the focus areas and targets, using the outcomes of the materiality assessment to define which focus areas to prioritise formalisation of reporting processes for.

- Create a centralised system where key stakeholders can report on relevant metrics to consolidate data collection efforts across the focus areas.
- Undertake progress review/audits annually against agreed actions in each area of the plan.

Looking Ahead

- 2025 – Prepare 2nd Green Plan
- 2028 – Prepare 3rd Green Plan

TRACKING AND REPORTING PROGRESS

Board to agree the communications strategy for the Green Plan.

Elements to consider:

- Appointment of local Green Plan representative for LRI, GH and LGH – to lead on local reporting and communications; focus on awareness and education to support reduction in carbon emissions
- Positioning for Sustainability and the Green Plan more prominently in the UHL website to raise visibility; develop a dedicated webpage on the intranet
- Re-establish key forum for communicating and driving the plan forward.
- Stimulate behavioural change across the Trust; commission an awareness campaign to target a 5-8% reduction in energy

The Trust will place emphasis on ensuring on-going engagement and

- Representation of specialist areas in response groups and workstreams; and
- Liaison with local and regional councils and external stakeholders to ensure the green plan is delivered

9. SUMMARY ACTION PLAN

WORKFORCE AND SYSTEM LEADERSHIP (WSL)		
Action #	Details of Action	Completion Date
WSL1	**Engagement** ▪ Scope existing sustainability committees and groups across the Trust ▪ Implement a strategic direction and vision with the scoping findings to identify operational actions and coordinate actions to impact on sustainability. ▪ CMG and Corporate Services People groups, to plan and implement local engagement forums local to their needs and enable capacity for forums to meet and take forward ideas; supporting project plans and resource needs where approved ▪ Carbon reduction and wider sustainability to feature as a regular agenda item at monthly CEO briefing ▪ Scheduled and targeted awareness events impacting both health and carbon footprint e.g. promoting alternative transport option ▪ Scope options for staff pledge environments ▪ Scope resource requirements for engagement with Green Plan / sustainability initiatives ▪ Update Trust on impact forums and activities are having quarterly throughout 2023	Q2 2022 2022 2022 Q3 2022 Q1 2022
WSL2	**Induction and Training** ▪ Green plan to be incorporated in induction presentation and staff handbook for new UHL employees ▪ Development of e-learning module on Waste management / sustainability Central support with training and development offer to support wider initiatives identified to support this agenda	2022 2022 2022
WSL3	**Developing Workforce models** ▪ Develop UHL agile working processes as part of NHSE/I Flex for the future programme ▪ Workforce plans built on service and digital transformation ▪ Support the appointment to OR development of people aligned to the Carbon reduction or wider sustainability goals Redesign employment contract to include corporate social responsibility	2022 2021 and ongoing 2023/24
WSL4	**Health and Wellbeing** Build sustainability principles into the delivery of Health and Wellbeing programmes	2022

WSL5	**Staff benefits** ▪ Review of ***'Salary Maxing'*** schemes to promote those supporting the carbon reduction agenda ▪ Promote and encourage use of public transport for travel to work / provision of sustainable models of care ▪ Incentivise the use of eco-friendly travel options and encourage use of public transport	2024 2023 2022
WSL6	**Developing Digital HR processes** ▪ Review HR processes with a focus on implementing digital options, e.g., digital forms ▪ Increased use of Electronic Rostering to enable payments ▪ Procurement contracts to include CSR and carbon footprint requirements	2022 2020/21
SUSTAINABLE MODELS OF CARE (SMC)		
SMC1	Identify and report 2021/22 Virtual appointments and set targets for 2021/22 onwards	Jun 2022
SMC2	Review potential for provision of care closer to home and define strategy	Dec 2022
SMC3	Prepare a report and carbon case studies to share with other Trust in best practice case studies identified in provision of sustainable models of care	August 2022
SMC4	Identify priority areas for further action and set out a plan (working with other stakeholders) to fund research and develop best practice	On-going
SMC5	Calculate the Social Value in economic, social and environmental impact from key initiatives	On-going
DIGITAL TRANSFORMATION (DT)		
DT1	UHL to undertake 'NHS Carbon Footprint Plus' to understand the impact of carbon emissions from ICT	2023
DT2	UHL to determine the impact of shifting from paper-based systems to e-platforms as a result of digital transformation and share success stories related to carbon reduction, resource use and waste reduction	End 2022
TRAVEL AND TRANSPORT (TT)		
Action #	Details of Action	Completion Date
TT1	UHL to Reduce air pollution associated with business mileage and fleet by 20%	2023/24

TT2	Trust to undertake NHS Carbon Footprint Plus calculations, to understand the carbon impact of Patient & Visitor travel and Staff Commuting.	Jan 2022
TT3	Trust to budget and agree the key priorities set within the TAP Prioritising (Phase 3) report	Dec 2021
TT4	UHL to develop the TAP Delivery (Phase 4). The key priorities in for Phase 4 include: Actions to support the ICU move to GH e.g. Santander Cycles Leicester e-bike dock at GH, Park & Ride from Beaumont Centre, short-term transport facility bridging ICU move and start of Park & Ride in early 2022; Development of online travel portals for staff and public; Engagement with Energy and Infrastructure Strategy to ensure TAP priorities and design requirements support one another; Sustainable travel network are developed during the Reconfiguration Programme Start of new TAP Delivery Groups for Phase 4. Engagement with Patient Partners and Healthwatch Leicester & Leicestershire and Healthwatch Rutland will be through their own separate meetings	Jan 2022
TT5	Sign up for a free Green Fleet Review;	Dec 2021
TT6	Ensure that any car leasing schemes (via Knowles) restrict the availability of high-emission vehicles (Operational Planning and Contracting Guidance and Standard Contract)	Dec 2021
TT7	End business travel reimbursement for domestic flights within England, Wales and Scotland over 2020/21 (Operational Planning and Contracting Guidance)	Dec 2021
TT8	Salary sacrifice policy to by EV to be extended over £1,000	Dec 2021
ESTATES AND FACILITIES (EF)		
EF1	**1st Green Plan Phase - 2022-2025** Setting out plans for NZC - on-going to be defined and aligned to the 5 year Estates and Facilities Strategy and the NHS Net Zero Carbon Building Standard (BETA Version) being a live document Plans to also address longer term waste, water management and biodiversity plans for the Estate, and dovetail with the Travel Action Plan.	2022-25

	Convene the sustainability group and ensure the operational estates and capital teams are aligned to deliver a lower carbon estate with reduced energy consumption before April 2022. Key initiatives to be defined post energy and estates workshops 5/7/21 including: ▪ Confirm the strategy to move away from steam when there is no other option or the plant has failed owing to the complexity and cost of transitioning away from steam heating to LTHW systems ▪ Elimination of oil use as standard, recognising that this will need to be available as a standby until alternative technology is available at the same level of reliability ▪ Consider links to district heat networks, although this is not currently a viable option ▪ Implement the NHS Net Zero Carbon Building Standard or at least NZC ready for refurbishments ▪ Consider installation of small-scale on-site renewables through the development of a strategy ▪ Western Power Distribution engaged to review whole site demand, and capacity of system to meet demand, between now and 2040 ▪ Key fabric improvement projects to reduce heating and cooling loads to be reviewed ▪ Trust wide Energy Savings Campaign and behavioural change energy savings ▪ LED Lighting retrofits completed (co-dependency around digitisation strategy – IoT, security and controls tbc - see also Digital Transformation section of plan) ▪ Sustainability Performance of Buildings – UHL has commissioned BREEAM assessments of the following new and existing buildings to drive performance for New Builds and Refurbishments and a path to achieve Excellent and Very Good rating respectively. ▪ Engagement with key stakeholders – externally including the University of Leicester, Leicester City Council, De Montfort University and Leicestershire County Council regarding land	

	use, buildings, district heat networks, sustainable travel hubs, carparking strategies etc	
MEDICINES (M)		
Action #	Details of Action	Completion Date
M1	UHL to undertake 'NHS Carbon Footprint Plus' to understand the impact of carbon emissions from Medicines and Medical devices	Jan 2022
M2	By the end of 2021, no more than 45% non-salbutamol inhalers prescribed to be metered-dose inhalers, set by the **Impact and Investment Fund**, with a financial incentive for Primary Care Networks	Dec 2021
M3	The Trust to reduce its use of desflurane in surgery to less than 10% of its total volatile anaesthetic gas use, by volume. *(Progress to be in line with NHS Guidance)*	2021/22 NHS Standard Contract
M4	Take steps to increase staff awareness, training to all staff	2022
M5	Clinical plastics: proposals from staff to re-evaluate alternative options for many single-use items, disposable or expired equipment and unused pharmaceuticals, as well as calls for the UHL to consider reusable or refurbish able alternatives	2022
SUPPLY CHAIN AND PROCUREMENT (SCP)		
Action #	**Details of Action**	**Completion Date**
SCP1	UHL to undertake 'NHS Carbon Footprint Plus' carbon foot printing to quantify the emissions in relation to procurement.	Jan 2022
FOOD & CATERING (FC)		
Action #	**Details of Action**	**Completion Date**
FC	UHL to undertake 'NHS Carbon Footprint Plus' carbon foot printing to quantify the emissions in relation to Food & catering	Jan 2022
CLIMATE CHANGE ADAPTATION (CCA)		
CCA 1	Review and sign off, of a climate change risk assessment, and adaptation plan	March 2022
CCA 2	Integration of key risks into UHL Central risk register	March 2022
CCA 3	Definition of ownership of the overall risk assessment process and implementation of actions	March 2022

CCA 4	Keep emerging risks and latest data in view and review key reports as expected to be published by the Government in June 2022 – UHL to Update Adaptation Plan	October 2022

10. REFERENCES

[1] UHL, “Building Better Hospitals,” [Online]. Available: https://www.leicestershospitals.nhs.uk/aboutus/building-better-hospitals/.

[2] NHS, “NHS Standard Contract,” [Online]. Available: https://www.england.nhs.uk/nhs-standard-contract/previous-nhs-standard-contracts/20-21/.

[3] NHS, “2021/22 NHS Planning Guidance,” [Online]. Available: https://www.england.nhs.uk/publication/2021-22-priorities-and-operational-planning-guidance/.

[4] NHS, “Delivering a 'Net Zero' National Health Service,” [Online]. Available: https://www.england.nhs.uk/greenernhs/publication/delivering-a-net-zero-national-health-service/.

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[8] UHL, “Sustainable Development Plan (SDMP),” 2017. [Online]. Available: http://www.library.leicestershospitals.nhs.uk/pubscheme/Documents/How%20we%20make%20decisions/Board%20Papers/(2017)%20-%20Thursday%203%20August%202017/paper%20L.pdf.

[9] UHL, “University Hospitals of Leicester NHS Trust Operational Plan 19/20,” [Online]. Available: http://www.library.leicestershospitals.nhs.uk/pubscheme/Documents/What%20our%20priorities%20are%20and%20how%20we%20are%20doing/Annual%20business%20plan/University%20Hospitals%20of%20Leicester%20-%20Annual%20Operational%20Plan%202019-20.pdf.

[10] UHL, “IT Strategy Update,” [Online]. Available: https://www.bettercareleicester.nhs.uk/EasysiteWeb/getresource.axd?AssetID=80165&type=full&servicetype=Inline.

[11] UHL, “Sustainability Development Management Plan (SDMP),” [Online]. Available: http://www.library.leicestershospitals.nhs.uk/pubscheme/Documents/How%20we%20make%20decisions/Board%20Papers/(2017)%20-%20Thursday%203%20August%202017/paper%20L.pdf.

[12] UHL, “UHL Waste Management Policy and Guidance,” 2021. [Online].

Appendix A
Carbon Calculations

NHS CARBON FOOTPRINT

UTILITY (ELECTRICITY, GAS AND OIL)

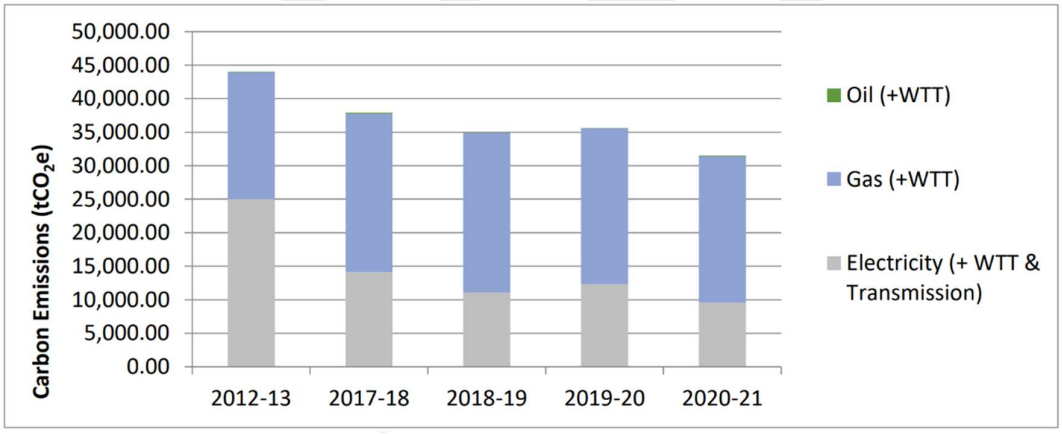
Utility data has been obtained from UHL from 2017 to 2021. Overall, the utility emissions have decreased about 28.41% in 2020/21 against the 2012/13 baseline.

The CHP units have performed to a higher level. This has reduced the overall emissions. The data takes account of an increase in patient activity/ demand for your services, poor winter conditions, and the increase cost in utilities from UHL's suppliers [11].

		2012-13	2017-18	2018-19	2019-20	2020-21
	Consumption	kWh	kWh	kWh	kWh	kWh
	Electricity	43,849,489	31,665,782	31,414,476	38,930,158	33,149,120
	Gas	88,688,241	111,562,260	113,912,143	112,030,467	105,096,913
	Oil	192,146	389,889	104,294	124,465	391,129
Overall		**132,729,876**	143,617,931	145,430,913	151,085,090	138,637,162

CO_2 Emissions (tCO_2e)

	2012-13	2017-18	2018-19	2019-20	2020-21	
Electricity (+ WTT	25,029.73	14,114.07	11,081.77	12,301.15	9,551.26	↓
Gas (+WTT)	18,918.09	23,652.31	23,868.01	23,275.45	21,837.04	↑
Oil (+WTT)	71.27	127.40	33.28	39.65	124.58	↑
TOTAL	**44,019.09**	**37,893.79**	**34,983.06**	**35,616.25**	**31,512.87**	↓



UHL have confirmed that since 1st April 2021, the electricity will be procured by REGO-backed renewable power. REGO certified tariff enables UHL to report zero emissions for Greenhouse Gas (GHG) reporting. Green electricity purchase through standard REGOs is a first step along the pathway to zero carbon.

Decarbonising the heat network will be critical for the UHL to meet its Net Zero targets.

WATER

Water consumption data has been obtained from UHL from 2017 to 2021.

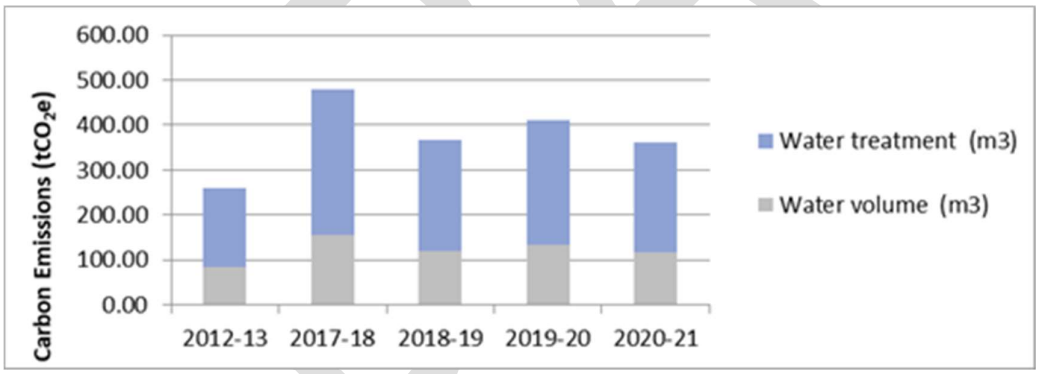
UHL's water use has increased by 39.52% in 2020/21 against the 2012/13 baseline. Some of this increase may be due to water leaks or issues with the drainage.

UHL have confirmed ongoing issues with the drainage system. If the flow rates are reduced the system gets clogged, creating further issues and maintenance costs.

		2012-13	2017-18	2018-19	2019-20	2020-21
		(m^3)	(m^3)	(m^3)	(m^3)	(m^3)
Water consumption	Water volume	246,998	454,648	348,159	390,375	343,213
	Water treatment					
Water and seweage cost (£)	Water and seweage cost (£)	641,211	977,213	888,151	862,811	1,080,186
Overall						

CO_2 Emissions (tCO_2e)

	2012-13	2017-18	2018-19	2019-20	2020-21
Water volume (m3)	84.99	156.40	119.77	134.29	118.07
Water treatment (m3)	175.00	321.89	246.50	276.39	242.99
TOTAL	259.99	**478.29**	**366.26**	**410.67**	**361.06**



WASTE

Waste data has been obtained from UHL from 2017 to 2021.

Currently Trust wide, around 4,000 tonnes of domestic and clinical waste are disposed per year. For clinical waste, segregation is now a legal requirement and the waste generated is annually audited at all three acute sites by an external specialist, this helps ensure that sharps, medicines and alternative treatment waste streams etc. are always separated, and again the latter is heat treated and then recycled as a refuse derived fuel.

Domestic waste

Domestic waste is collected from all three sites by AE Burgess and moved to their Ulverscroft Road site in Leicester, almost all of the waste is recycled as an refuse derived fuel, this could be at power stations either in the UK or most likely in the EU depending on the moisture & mix of waste content. AE Burgess have reported that around 5% is a typical value which may have been sent to landfill.

Bakers Waste collects waste cardboard from all three site and it is sent for recycling.

Restore Datashred collects the confidential waste from all three sites and it is then shredded on site which produces waste-paper ready for recycling, this material is then removed from site by this company. UHL will request data from the supplier to validate this reduction.

Clinical waste

Clinical waste is collected by Stericycle and moved to their waste transfer station and incinerator in Telford, where all of the clinical waste is incinerated.

UHL are taking steps to reduce the plastic waste and signed the NHS Plastic Pledge.

In addition to that, UHL are taking action for inhaler recycling. The Leicestershire Take AIR (Take Action for Inhaler Recycling) scheme, will enable to safely and effectively recycle the empty, unwanted or expired inhalers through the post.

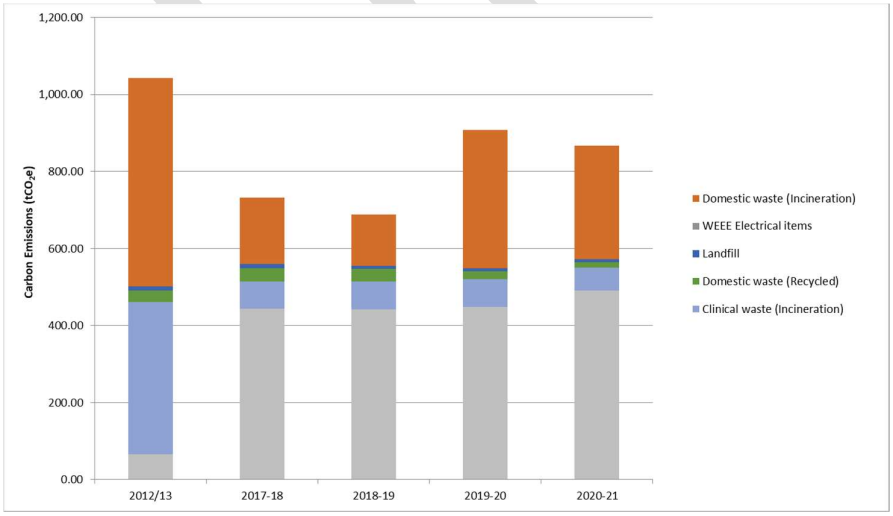
The Take AIR scheme will accept all inhalers, of any brand, such as:

- Pressurised metered dose inhalers or 'puffer' inhalers
- Dry powder Inhalers
- Soft mist inhalers

				2012-13	2017-18	2018-19	2019-20	2020-21
	EWC Waste Codes		Disposal method	Tonnes	Tonnes	Tonnes	Tonnes	Tonnes
Clinical Waste	18 01 03	Alternative treatment	Non-burn/alternative treatments	274.34	1,848.09	1,843.35	1,869.05	2,041.93
	180103/09	Haz Sharps Incineration	Incineration	1,646.02	237.73	232.62	243.31	245.92
	18 01 03	Haz Anatomical			23.03	29.14	23.45	
	18 01 08	Haz Cytotoxic and cytostatic medicines			21.98	19.98	20.04	
	18 01 02/18 02 03	tbc			0.00	0.00		
	18 01 09	Other medicines Non-hazardous			13.42	13.36	13.04	
	18 01 04	Offensive waste			0.41	0.77	0.83	4.70
				1,920.36	**2,144.66**	**2,652.74**	**2,169.72**	**2,292.55**
Domestic Waste	RDF (Refuse Derived Fuel)	Waste to energy	Incineration	1,542.24	492.72	377.93	1,020.00	842.22
	Dry Mix Recycling (DMR)	Re-use	Recycled	1,402.81	275.92	206.15	71.57	491.29
	Recycled	Recycled			1,103.68	1,047.91	608.42	
	Carboard	Recycled (Cardboard)				84.13		
	Confidential wate	Recycled (Paper)			209.49	206.90	210.39	148.29
	Landfill		Landfill	99.12	98.54	85.89	89.47	77.86
	WEEE	Electrical items		0.00	0.00	3.49	16.40	0.00
				3,044.17	**2,180.35**	**2,012.40**	**2,016.25**	**1,559.66**
Overall				**4,964.53**	**4,325.01**	**4,665.14**	**4,185.98**	**3,852.21**

CO_2 Emissions (tCO_2e)

	2012/13	2017-18	2018-19	2019-20	2020-21	
Clinical waste (Alternative Treatment)	65.86	443.63	442.50	448.67	490.17	↑
Clinical waste (Incineration)	395.13	71.19	71.02	72.18	60.16	↓
Domestic waste (Incineration)	541.02	172.85	132.58	357.82	295.45	↓
Domestic waste (Recycled)	30.53	34.58	33.62	19.37	13.92	↓
Landfill	9.91	9.85	8.59	8.95	7.79	↓
WEEE Electrical items	0.58	0.00	0.08	0.36	0.00	↓
TOTAL	**1,043.02**	**732.10**	**688.38**	**907.34**	**867.48**	↓



ANAESTHETIC GASES

Amongst anaesthetic gases, desflurane is one of the most common, but also one of the most harmful.

UHL have been encouraging the use of alternative surgical anaesthesia options to reduce the use of desflurane, such as switching to lower carbon alternative sevoflurane. The trend shows that the use of desflurane has decreased over the last years, due to efforts from ITAPS staff.

N2O and portable Entonox usage has increased over the last years. UHL will need to review options to reduce the usage.

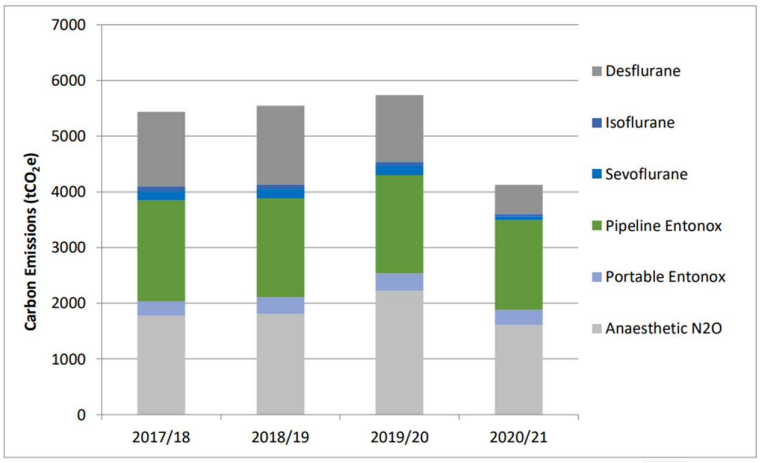
UHL have also implemented a cylinder tracking system which should reduce loss / waste / over-ordering of medical gas cylinders through us better knowing where these are located.

Please note that COVID-19 has reduced overall anaesthetic gases over the last 12 months, so this cannot be taken as representative year.

					2017-18	2018-19	2019-20	2020-21
Medical gas	Cylinder code	Volume nitrous oxide at 15C (l)	Mass of nitrous oxide in cylinder (kg)	tonne CO2e per cylinder	Cylinder returns (No.)	Cylinder returns (No.)	Cylinder returns (No.)	Cylinder returns (No.)
Nitrous oxide	D	900	1.65	0.437	14	5	11	11
	E	1800	3.5	0.928	34	23	9	16
	F	3600	6.7	1.776	2	1	2	1
	G	9000	16.75	4.439	391	401	497	358
	J	18000	33.5	8.878				
Entonox®	EA	175	0.33	0.087				
	CD	220	0.41	0.109				
	D	250	0.46	0.122	7	11	13	5
	ED	350	0.643	0.17	269	319	319	390
	F	1000	1.838	0.487	382	281	322	206
	HX	1100	2.05	0.543				
	EX	1750	3.216	0.852	29	130	121	119
Entonox ® Manifold	G	2500	4.594	1.217	1490	1457	1449	1322
	EW	8138	14.956	3.963				
Anaesthetic N_2O total (Tonnes CO_2e)								
				tonne CO2e per litre	Litres	Litres	Litres	Litres
Sevoflurane				0.2	857.75	865.75	852	397.25
Isoflurane				0.76	110.5	98.75	90.25	55.75
Desflurane				3.72	361.68	381.11	322.08	138.5
Vapour total								
Overall CO_2eq								

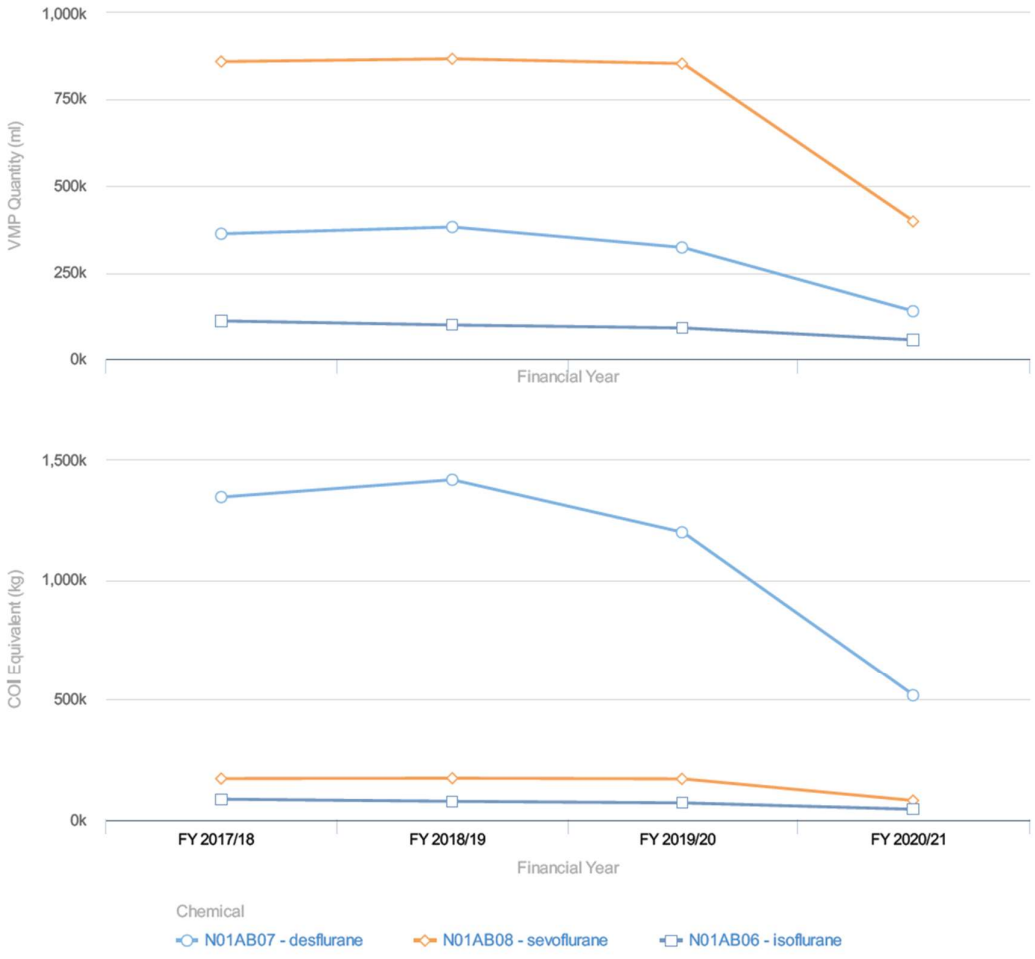
CO_2 Emissions (tCO_2e)

	2017-18	2018-19	2019-20	2020-21	
Anaesthetic N_2O	1,773.32	1,803.57	2,219.34	1,608.82	↓
Portable ENTONOX	257.33	303.18	315.72	268.62	↑
Pipeline ENTONOX	1,813.33	1,773.17	1,763.43	1,608.87	↓
Sevoflurane	164.69	173.15	170.40	79.45	↓
Isoflurane	83.98	75.05	68.59	42.37	↓
Desflurane	1,345.45	1,417.73	1,198.14	515.22	↓
TOTAL	**5,438.09**	**5,545.85**	**5,735.62**	**4,123.35**	↓



Filter Summary

Date Range: Apr 2017 - Mar 2021. **Mixed**: ATC: N01AB - Halogenated hydrocarbons. **Specialties**: Internal (exc. Stock, Sales) (245 of 249). **Local Directorates**: 15 of 15. **Prescription Types**: All. **Formulary**: All



METERED DOSE INHALERS

Data on inhalers have been received from UHL from 2017 to 2021.

pMDI contain hydrofluorocarbon (HFC) propellants that do not have an effect on the ozone layer but are powerful greenhouse gases and can contribute to global warming.

DPI do not use these propellants and have substantially lower global warming potential, producing 20g CO2e per dose compared with 500g CO2e for some pressurised metered dose inhalers.

The data shows that UHL have used approximately 2.8million units of pressurised metered dose inhalers (pMDI) and 258,000 units of dry powder inhalers (DPI) in 2020/21 year.

The trend shows that the use of pressurised metered dose inhalers increased from 2017/18 to 2019/20 around 3.4% per year but decreased by 33% over the last year. The use of the dry powder inhaler has slightly decreased from 2017/18 to 2019/20 and further decreased around 29% over the last year.

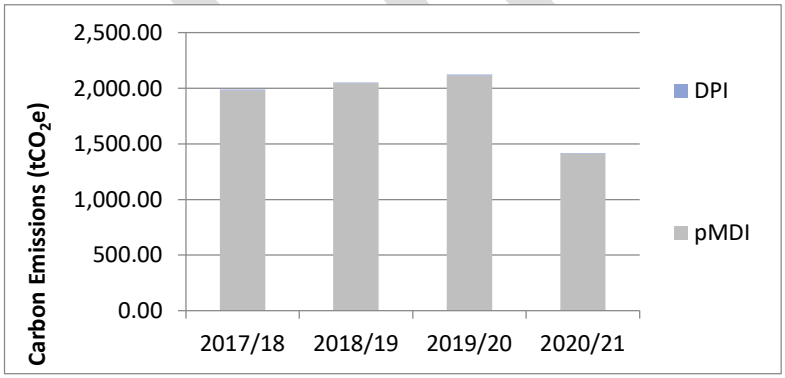
COVID-19 has reduced overall prescribing of inhalers in UHL due to the reduction in asthma and COPD patients being admitted over the last 12 months, so this cannot be taken as representative year.

UHL tried to push towards MDI use for salbutamol with a spacer device instead of a nebuliser prescription due to aerosol generation.

		2017-18	2018-19	2019-20	2020-21
		VMP units	VMP units	VMP units	VMP units
pMDI	Pressurised metered dose inhaler	3,960,216	4,092,852	4,233,916	2,821,652
DPI	Dry Powder Inhaler (DPI)	415,568	390,800	364,682	258,836

CO_2 Emissions (tCO_2e)

		2017-18	2018-19	2019-20	2020-21	
pMDI	Pressurised metered dose inhaler	1,980.11	2,046.43	2,116.96	1,410.26	↓
DPI	Dry Powder Inhaler (DPI)	8.12	7.63	7.11	5.05	↓
TOTAL		**1,988.22**	**2,054.06**	**2,124.06**	**1,415.31**	



REFRIGERANT GASES

Refrigerant related Greenhouse Gas Emissions

UHL has a wide range of refrigeration, air conditioning and fire suppressant equipment across the estate containing Fluorinated gases (F gases). These gases have significant global warming potential (up to many thousands more times than carbon dioxide per kg).

Air conditioning and refrigerators can leak leading to GHG emissions. These emissions are reported under scope 1 (direct emissions). However, emissions may fall into scope 3 for other parties benefitting from the equipment. The extent/details for the latter point will be reviewed in the future.

There are two methods for the estimation of emissions from the use of refrigeration, air conditioning equipment and heat pumps (Full details of the application methodology are described in the Government Guidance Page 98: Environmental Reporting Guidelines (publishing.service.gov.uk)), and summarised as follows:

Screening Method - estimates emissions from refrigeration, air conditioning and heat pumps based on the type of equipment used, typical leakage rates (according to an accepted annual %) and the refrigerant used and its related global warming potential. This approach requires an inventory of equipment, categorised by type (to determine leakage) and the data for refrigerant charge. This is not a true measure of losses, but assumes small losses across all equipment, whereas;

Simplified Material Balance Method – Enables more accurate estimation of refrigerant leakage than the screening method because it requires records of the quantities of refrigerants used rather than relying on default factors. This method takes into account losses of refrigerant at any stage of the lifecyle from installation to decommissioning of equipment. The method uses 4 steps as follows:

1. Calculate installation emissions (only necessary if installing any new equipment during the reporting period that was not pre-charged by the equipment supplier

2. Determine equipment servicing emissions. Assumes that the servicing refrigerant is replacing the same amount that was lost to the environment.

3. Calculate disposal emissions - only necessary if disposing of equipment during the reporting period. Emissions are calculated by taking the difference between the total capacity of the equipment disposed and the amount of refrigerant recovered. The difference is assumed to be released to the environment.

4. Calculate emissions - calculated by summing the results of the first three steps. Approach should be used for each type of refrigerant, and emissions in CO2e calculated based on the Global Warming Potential of each refrigerant.

Estimation approach for UHL using the Screening Method

For the purpose of the Green Plan, the Screening method has been applied to estimate the emissions using the available F Gas inventory of equipment across the 3 sites. It should be noted that the equipment inventory provides partial information as it does not record the type of unit installed including Domestic Refrigeration; Small Hermetic Stand-Alone Refrigeration Units; Condensing Units; Small

Stationary Air Conditioning; Medium Stationary Air Conditioning; Large Stationary Air Conditioning (Chillers); Heat Pumps) or whether the unit was installed/used full or part year.

As such two key assumptions have been made in applying the Screening Method as follows:

- An average leakage rate of 3% per annum for all units, and
- That all units were installed for the whole year

This provides a high-level estimation of the emissions but may result in an under or overestimate for individual units.

Looking ahead:

Reducing refrigerant related emissions is a component of UHL's journey to Net Zero Carbon emissions. UHL will aim to use F-gases with lower global warming potential and retrofit gases where possible. It is likely that additional air conditioning equipment, heat pumps and other equipment containing F gases will be installed throughout the reconfiguration programme and procurement of new equipment (including refrigeration, air-conditioning, heat pumps, and fire suppressant equipment etc) should give due consideration to the selection of equipment with F gases with lower global warming potential. Given the overall scale of emissions estimated.

In the longer term, UHL will aim to collect data for the refrigerant losses across the 3 Hospital sites and calculate associated carbon dioxide equivalent emissions using the Simplified Material Balance Method. This will include recorded losses for install, maintenance and removal of small-scale packed air conditioning equipment, refrigerators both domestic and commercial scale and larger AC plant including manufacturer serviced chiller etc.

BUSINESS TRAVEL

The trend shows that the Business travel is decreasing over the last years. The largest emissions come from car travel, followed by the bus use and the long air haul travel.

Encouraging sustainable travel

UHL will work together to plan how we achieve the requirements of the NHS Standard Contract 2020-21 regarding the development and operation of expenses policies for staff which promote sustainable travel choices and Travel reduction Policies.

Expenses UHL Policy

Air Travel

UHL will incorporate domestic flights ban and roll out of virtual collaboration tools. Facilitate connectivity and new digital ways of working to enable the shift in service delivery. Where face-to-face is not essential, we will continue to promote the use of digital working, e.g. Microsoft Teams.

Road Travel

UHL Staff Taxi Usage and Inter Hospital Transport UHL Policy

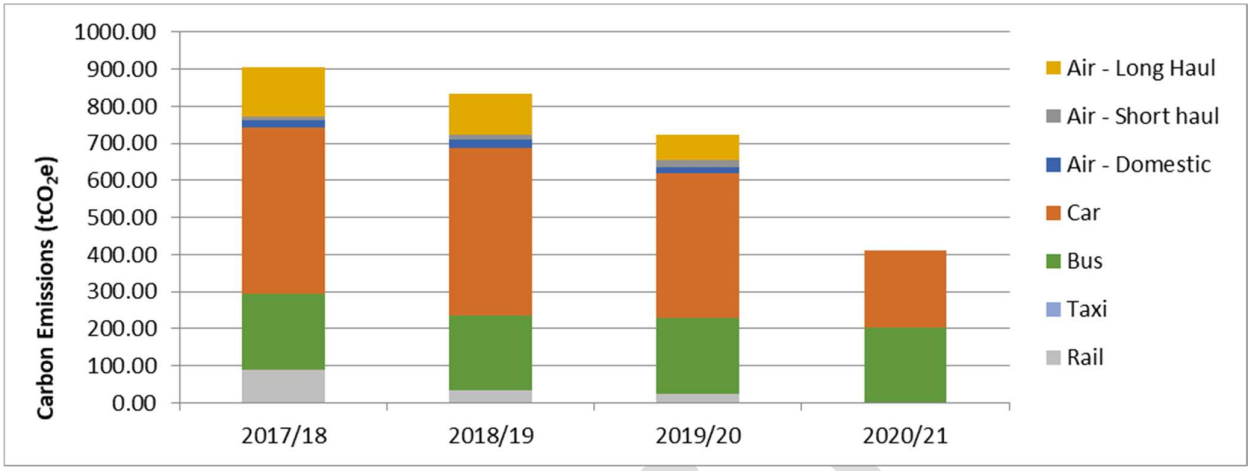
Bus Travel

Centrebus have provided the annual mileage and emissions for bus journeys. Bus mileage breakdown for business travel and commute is not available. At present, emissions derived from bus travel have been included under the business mileage, but in the future more detailed breakdown should be provided.

			2017-18	2018-19	2019-20	2020-21
Travel			miles	miles	miles	miles
Road	Rail	Rail (+ WTT)	987,726	387,290	319,720	1,421
	Taxi	Taxi (+ WTT)	92	148	452	0
	Bus	Bus (+ WTT)	153,779	153,779	153,779	153,779
	Car	Car (+ WTT)	1,264,104	1,282,130	1,132,839	614,141
			2,405,700	**1,823,348**	**1,606,790**	**769,341**
Air	Domestic	Economy (+ WTT)	36,389	40,710	34,288	1,290
		Business (+ WTT)	1,294	0	0.00	0
	Short Haul International Flights	Economy (+ WTT)	38,399	38,104	53,932	0
		First (+ WTT)	0	0.00	3,700	0
		Business (+ WTT)	0	1,270.00	0	0
	Long haul International Flight	Economy (+ WTT)	316,447	251,281	86,208	66,216
		Premium Economy (+ W	0	36,189	27,480	14,184
		First (+ WTT)	0	15,468	8,638	0
		Business (+ WTT)	65,061	9,368	33,837	14,184
			457,590	**392,536**	**1,854,873**	**95,874**
Overall			2,863,290	2,215,884	3,461,664	865,215

CO_2 Emissions (tCO_2e)

	2017-18	2018-19	2019-20	2020-21	
Rail	89.00	32.88	25.24	0.09	↓
Taxi	0.04	0.06	0.19	0.00	↓
Bus	203.43	203.43	203.43	203.43	
Car	450.43	452.89	391.44	206.51	↓
Air - Domestic	18.00	21.69	15.61	0.59	↓
Air - Short haul	10.88	11.41	18.47	0.00	↓
Air - Long Haul	133.48	113.30	68.30	34.44	↓
TOTAL	**905.26**	**835.66**	**722.68**	**445.06**	↓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Carbon Emissions (tCO2e)
2017/18
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2020/21
Air - Long Haul
Air - Short haul
Air - Domestic
Car
Bus
Taxi
Rail

TRAVEL – LEASED & OWNED VEHICLES

The following leased & owned vehicles have been accounted for as part of the UHL NHS Carbon Footprint calculations.

Leased vehicles

UHL leased vehicle report has been provided that include the vehicle type, fuel type and the mileage.

Supplies vehicles

Two diesel vans are being used as Supplies vehicles. Larger Luton van has only been with us since April/May of 2020 and covers about 40-50 miles a week. Citroen Berlingo covers about 100 miles a week. Pre COVID this van covered approx.20 - 30 miles on an average week.

Pathology vehicles

Leased transit vans are being used as Pathology vehicles from Hertz. There are 12 diesel vans, for which 10 of them (Vauxhall Combo/Vivaro) cover approx. 100-130 miles per day. Vans 11 & 12 are used for emergencies ad-hoc and the fuel cost for those is approx. £31k per annum.

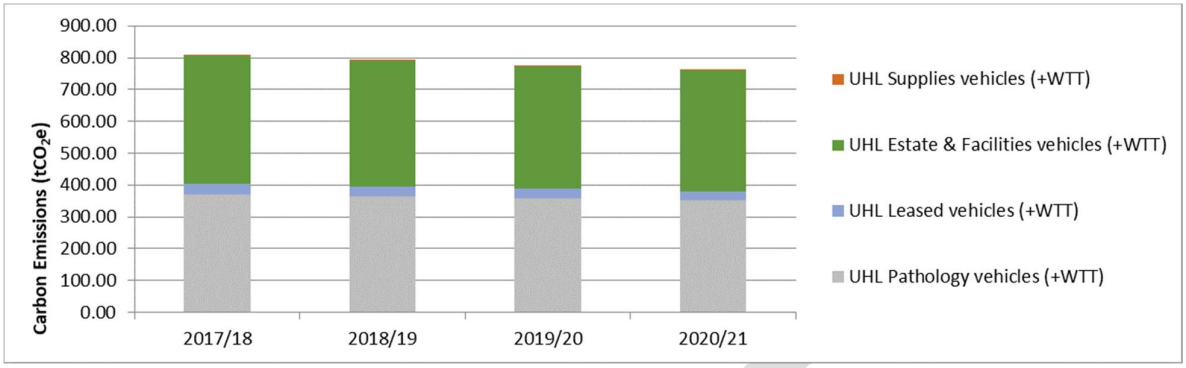
Estates & Facilities vehicles

UHL Estates& Facilities vehicle report has been provided that include the list of leased of owned vehicles.

		2017-18	2018-19	2019-20	2020-21
		miles	miles	miles	miles
UHL Pathology vehicles	Pathology vehicles (Leased)	726,500	726,500	726,500	726,500
		726,500	**726,865**	**726,500**	**726,500**
UHL Leased vehicles	Leased vehicles petrol	40,853	40,853	40,853	40,853
	Leased vehicles diesel	9,826	9,826	9,826	9,826
	Leased vehicles petrol/hybrid	26,920	26,920	26,920	26,920
	Leased vehicles electric	3,900	3,900	3,900	3,900
		81,499	**81,530**	**81,499**	**81,499**
UHL Estate & Facilities vehicles	Estates & Facilities support Leased vehicles	176,000	176,000	176,000	176,000
	Park & Ride Leased vehicles	245,588	245,588	245,588	245,588
	Estates & Facilities support Hired vehicles	246,000	246,000	246,000	246,000
	Estates & Facilities support Owned vehicles	117,000	117,000	117,000	117,000
		784,588	**784,983**	**784,588**	**784,588**
UHL Supplies vehicles	Leased vehicle (Luton van)	1,560	1,560	1,560	2,600
	Owned vehicle (Citroen Berlingo)	0	0	0	5,200
		1,560	**1,560**	**1,560**	**7,800**
Overall		**1,594,147**	**1,594,937**	**1,594,147**	**1,600,387**

CO_2 Emissions (tCO_2e)

	2017-18	2018-19	2019-20	2020-21	
UHL Pathology vehicles (+WTT)	371.95	365.34	357.84	350.89	↓
UHL Leased vehicles (+WTT)	31.16	30.60	29.60	29.77	↓
UHL Estate & Facilities vehicles (+WTT)	401.69	394.55	386.46	378.95	↓
UHL Supplies vehicles (+WTT)	0.80	0.78	0.77	4.16	↑
TOTAL	**805.61**	**791.28**	**774.67**	**763.77**	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Carbon Emissions (tCO2e)
2017/18
2018/19
2019/20
2020/21
UHL Supplies vehicles (+WTT)
UHL Estate & Facilities vehicles (+WTT)
UHL Leased vehicles (+WTT)
UHL Pathology vehicles (+WTT)

Appendix B
Sustainable Models of Care: detailed case studies

FOCUS ON PREVENTATIVE CARE AND WELL-BEING

With the support of the Leicester Hospitals Charity (LHC) the Trust has been able to achieve positive outcomes benefitting both patients and helping to deliver our NZC and sustainable goals.

The following case studies highlight past successes which the Trust is looking to both build on and better understand the contribution to our NZC journey, wider sustainability and social value:

CASE STUDY 1 - NEW EQUIPMENT TO IMPROVE DIAGNOSTICS AND REDUCE CARBON EMISSIONS

With the support of LHC, UHL has been able to purchase Ultrathin Transnasal Endoscope (UTE). Most of the time, patients must be sedated for it to be used. If a patient has cancer, staff may not be able to pass the endoscope, because the scope is too wide. The UTE is four times narrower and rarely requires sedation. This reduces the use of anaesthetics with global warming potential, reduces staffing needs and time for procedures. Overall, it's more comfortable for patients, and has allowed the department to reduce waiting times. Patients on the cancer pathway are often able to be diagnosed earlier than they would have with just the standard-size endoscopes available. Because a general anaesthetic isn't required, the procedure can be scheduled more quickly and completed with a reduced carbon footprint.

Action: UHL is planning to purchase additional UTE to support this.

CASE STUDY 2 - SUPPORTING OUR STAFF THROUGH DIFFICULT EXPERIENCES

Perhaps the most notable example of this is through our regular UHLotto supported by LHC, which Trust staff are able to enter for a chance to win prizes for £1 a month. Thirty percent of the money raised from the UHLotto is used to support the Trust's Wellbeing at Work programme to benefit all of our staff, including activities, therapies and discounts to help staff enhance their physical and mental health. The remaining funds are used for additional, larger wellbeing projects. In 2020, one of those projects was the introduction of Schwartz Rounds across all three hospital sites. The LHC awarded a two-year grant in the amount of £12,000 to pilot Schwartz Rounds for staff across UHL. Schwartz Rounds are incredibly valuable to staff across the Trust – both clinical and non-clinical – specifically regarding supporting their mental health and wellbeing and enabling staff to reflect, empathise and learn from a wide range of experiences and situations to improve the patient's journey.

CASE STUDY 3 - RESEARCH TO IMPROVE PATIENT'S LIVES

The John Walls Renal Unit at Leicester General Hospital helps to treat people with kidney disease not just from Leicestershire & Rutland, but from parts of Lincolnshire, Northamptonshire and Cambridgeshire. The renal team treat hundreds of people who complete kidney failure and need dialysis treatment or a kidney transplant to take the place of the kidneys. They also treat many people with less severe kidney disease and work to stop it getting worse. Regular exercise is important for us all and helps patients with all stages of kidney disease. The Renal Unit's research is finding out how exercise helps kidney patients, working out the best sort of exercise for them, helping patients to start

regular exercise and continue it. Leicester is now the leading centre in the UK for research into exercise for kidney disease. LHC has supported UHL with funding from their Kidney Care Appeal, helping to kick-start pilot studies for early career researchers that can act as a proof-of-concept and help to attract larger-scale funding in the future. This includes on-going research into muscle wasting in patients with chronic kidney disease, and exercise interventions, that are used to help combat this. By providing support and early intervention – it is hoped to be able to improve patient outcomes and reduce additional healthcare requirements.

Action: Further research to evaluate the outcomes of the research and benefits to the Trust in terms of reduced healthcare impacts etc.

CASE STUDY 4 - IMPROVING FACILITIES TO SUPPORT OUR PATIENT'S WELLBEING

Play has many benefits to a child's wellbeing and that is why the United Nations consider it a human right of a child. Charitable funding is vital to provide additional play facilities within the hospitals. It is well researched that being outdoors and surrounded by nature is beneficial for a child's environmental and spiritual health and thanks to a £3000+ donation from the family of a leukaemia patient, the play-roof above the Windsor Building has been given a new lease of life. The new play-roof has been designed to encompass activities that holistically benefit the health and development of young patients. The conservatory divides it's time acting as a storage unit filled with beanbags, bikes, toys and tents; and working as an indoor space to play and learn. There is increasing research that a holistic approach to care accelerates the recoveries of young patients. "Play is the centre of everything for a child, helping to release tension and reduce negative feelings such as anger, frustration and isolation due to their condition. Play is also an indicator of recovery. This space allows children and their families to escape from the wards and forget that they are in hospital, even if only for a moment. The ability to go outside and benefit from the fresh air is so crucial for mental health – being confined to a hospital bed may treat the physical condition but it can be really hard-going emotionally for the children who must face uncomfortable treatments day after day.

LHC has also provided annual funding for the patient buggy service to aid patients in travelling to their appointments on site, programmes to provide various supportive beauty services to patients when they cannot leave their beds and companionship during end of life, an Arts & Heritage programme overseen by the Arts & Heritage committee to engage both staff and patients in artistic production, supporting wellbeing and patient and staff engagement.

CASE STUDY 5 - ENABLING MORE TAILORED CARE FOR OUR PATIENTS

Each year the LHC Charity organise a "Butterfly Walk" event which raises funds for UHL's Breast Care Centre. 2019's event successfully raised over £20,000 which helped purchase a salient dual head injection system for the centre. This purchase has since led to the opening of the Contrast-Enhanced Spectral Mammography (CESM) Clinic in December 2019. This specialist clinic offers advanced breast x-ray examinations using a special dye that is injected into the patient's arm using the salient dual head injection system. This dye produces a clearer image than a traditional mammography – it highlights any abnormalities and allows the radiologist conducting the investigation to understand the structure of the

patients' breast tissue better. Previous MRI investigations required are significantly more time consuming and energy intensive, so the transition to CESM has provided a range of economic, healthcare and environmental benefits.

Action: Consider evaluation of social and environmental benefit of these outcomes.

CASE STUDY 6 - ENABLING "FIRST OF ITS KIND" TREATMENT TO SAVE LIVES

Approximately 1 in 5 people aged over 60 in the UK have a form of vascular disease, a condition where the arteries suffer from a build-up of fatty deposits which prevent blood, oxygen and vital nutrients from reaching skin and tissue – particularly in the feet. It is usually caused by smoking and diabetes and for some; this can lead to a serious condition called Critical Limb Threatening Ischaemia (CLTI) where symptoms include persistent leg pain and ulceration. For these patients, access to quick medical intervention is crucial to prevent loss of limbs. Worldwide, someone has a major lower limb amputation every 30 seconds. In the UK, statistically 12 people lose their foot or leg every day. George Davies, a local philanthropist, most known for being the founder of high-profile clothing brands Next and George at Asda, generously donated £5.15 million pounds to the University of Leicester and the University Hospitals of Leicester Trust to fund research into vascular disease and set up The Vascular Limb Salvage (VaLS) Clinic at Glenfield Hospital.

The VaLS clinic is the first of its kind and aims to provide a rapid access service to adult patients suffering from suspected CLTI or Diabetic Foot Ulceration (DFU). Now in its 3rd year in operation, the clinic has cared for over 500 patients, and is yielding positive results and winning awards. Our research has shown that treatment at the VaLS Clinic is helping to save limbs. 74% of VaLS patients did not have any limbs amputated within a year after treatment - a 15-–19% improvement compared to those outcomes in pre-clinic and alternative pathway data. The clinic has witnessed a 50% decrease in the rate of major amputations when compared to the other data – meaning that the clinic is not only helping to save limbs, but those requiring amputations are more likely to have a less-severe minor amputation. Less-invasive procedures leads to quicker rehabilitation and an improved quality of life for these patients.

Action: Consider evaluation of social and environmental benefit of these outcomes.