

Appendix 1 Sustainability Progress Update

**Public Board
25th November 2021**

1. Introduction

At LTHT we recognise the enormous challenge that the issues of climate change, air pollution and waste present to our city and the impact these issues will have on our patients. We have undertaken significant work over the past several years to address these issues, this has included publishing a Carbon Reduction Plan, a Sustainable Development Management Plan and most recently the Green Plan.

LTHT have a clear commitment to improving sustainability performance and have the aspiration to become one of the greenest NHS Trusts. We provide six-monthly updates on our progress to the Finance and Performance board. Sustainability updates have been included within the blue box for information however, in light of the increased public interest in the issues of climate change and the growing importance of carbon reduction, this report aims to inform on our sustainability work since the publication of the Green Plan in September 2020.

This report provides context on the NHS's response to the climate health crisis, with the publication of a net-zero strategy as part of their Greener NHS Campaign launched last year and the target of achieving net-zero carbon emissions across the NHS by 2040. The report also benchmarks our progress against our Green Plan strategy and details the key actions and interventions we have implemented as part of this plan and to mark the recent COP26 climate conference.

2. Climate Change and Health

Climate change refers to the long-term shifts in temperatures and weather patterns on global and regional scales. The term is most often used to describe the alterations to climate which have been apparent since the mid-to-late 20th century due to the increasing number of greenhouse gas emissions largely attributed to the burning of fossil fuels from human activity.

Climate change poses a significant threat to our environment and is already causing extreme weather events to occur more frequently. Many organisations such as the British Government, Leeds City Council, and various Royal Colleges have, in turn, declared a climate emergency. The term 'climate emergency' is defined as 'a situation in which urgent action is required to reduce or halt climate change and avoid potentially irreversible environmental damage resulting from it'. However, an increase in heatwaves, droughts,

storms, and floods will also lead to increases in health problems such as cancer and disease, increasing the pressure on the healthcare sector.

Climate change is now considered the greatest environmental threat to global health of the 21st century, and this has been echoed by the NHS England CEO Amanda Pritchard, who has stated that ‘climate change is a health emergency, as well as an environmental emergency’. The interdependencies between climate and health are widely supported by the medical community, highlighting the need to address climate change as a significant issue.

3. NHS Response to the Climate Emergency

As the UK’s largest public sector employer, the NHS is responsible for approximately 4-5% of the nation’s carbon emissions and is thus a significant contributor towards the effects of climate change. The NHS can therefore play a substantial role in supporting the transition to net-zero carbon emissions in the UK.

In line with the Climate Change Act 2008, the UK has set a mandatory national target to reduce carbon emissions to net-zero by 2050. In recognition of this target and the NHS’s significant role in the UK’s carbon footprint, the NHS has established two net-zero targets, to achieve net-zero by 2040 for the NHS Carbon Footprint and by 2045 for the NHS Carbon Footprint Plus. The scopes of these two carbon footprints are shown in Figure 1.

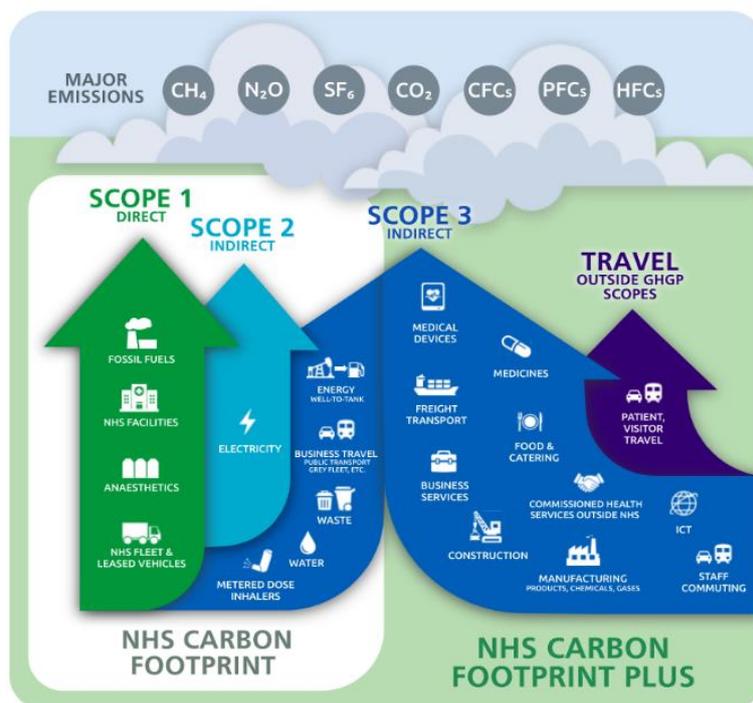


Figure 1: The Greener NHS Carbon Footprint and Carbon Footprint Plus

The NHS has concurrently adopted an organisation-wide sustainability strategy led by the 2020 announcement of the *For a Greener NHS Campaign*. This campaign aims to provide top-down support to help NHS health providers to reduce their impact on the environment and improve health. The campaign builds upon the great work already being done in the NHS to improve sustainability, an expert panel has been established to chart the best route

for the NHS to become carbon net-zero, reduce air pollution and reduce waste; an aim that will require the dedication of all Trusts, staff, and partner organisations.

4. LTHT Response to Climate Change

Green Plan

In response to the NHS targets and the wider climate change agenda, LTHT have published a Green Plan. This Green Plan was developed to enable the Trust to improve our overall environmental performance and has three key aims – to reduce carbon emissions, air pollution, and waste. The Green Plan document maps the Trust’s progress on emissions reduction from the 2013/14 baseline year and acts as the central sustainability strategy for 2020-2022 in which progress has been made across all areas.

Carbon Targets

The Trust’s baseline for CO₂e emissions was measured in 2013 and totalled 107,501 tCO₂e/annum. In 2020 the ‘For a Greener NHS’ Campaign set out the NHS’s ambition to become net-zero by 2040, 10 years ahead of the national 2050 target established in the Climate Change Act 2008. In line with the NHS Target, LTHT will aim to achieve a 100% reduction of its direct CO₂e emissions footprint per annum by the year 2040, with a further target to reduce indirect emissions to net-zero by 2045.

Year	Target Emissions Reductions (%)	Target Emissions (tonnes CO₂e/annum)
2032	80%	21,500
2040	100%	0

Table 1: LTHT Direct Emissions Target

Performance Against Targets

As shown in Figure 2, in 2020/21, the total carbon emissions from the Trust was 81,939 tCO₂e, a 24% reduction in emissions from the baseline year. Reductions in emissions from 2019/20 have been achieved in all aspects other than in water. This increase is likely due to increased water demands for hand washing, flushing and other measures associated with Covid-19. The increase in emissions from gas is due to the resumption in CHP use, which has created a reduction in emissions of 5,063 tCO₂e from gas and electricity overall. This figure also does not account for the changes in patient numbers; CO₂e emissions generated per patient treated decreased by 31% between 2013/14 and 2019/20. To meet the next interim target of an 80% reduction by 2032 the Trust must reduce carbon emissions by an average of 5,721 tCO₂e annually.

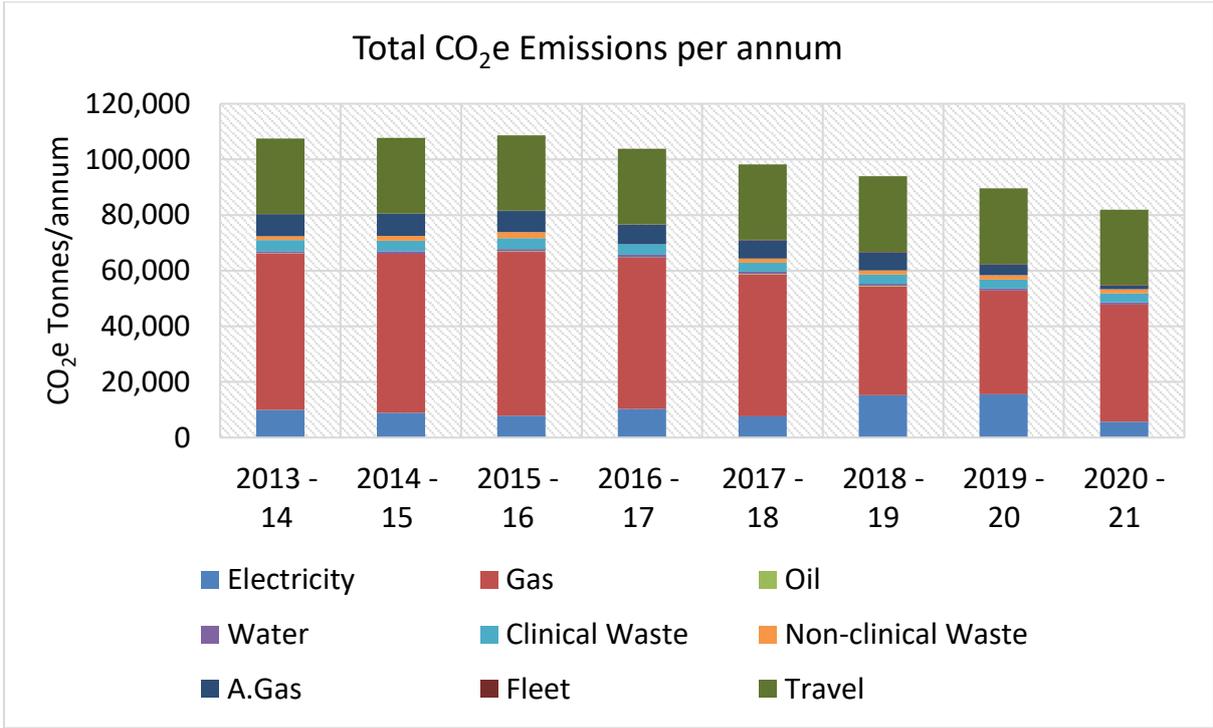


Figure 2: LTHT Total Annual Direct CO₂e Emissions

As shown in Figure 3, current projections estimate that the Trust will achieve a 68% reduction in direct carbon emissions by 2040. This projection considers the current level of emission reduction work being carried out at the Trust and the regional and national decarbonisation interventions that are planned. These interventions include the decarbonisation of heating through the transition of the Leeds’s gas grid network from a natural gas fuel to a zero-emission hydrogen fuel and the ban on sale of petrol, diesel, and hybrid vehicles. These planned interventions, if implemented, will help the Trust to achieve substantial CO₂e emission reductions.

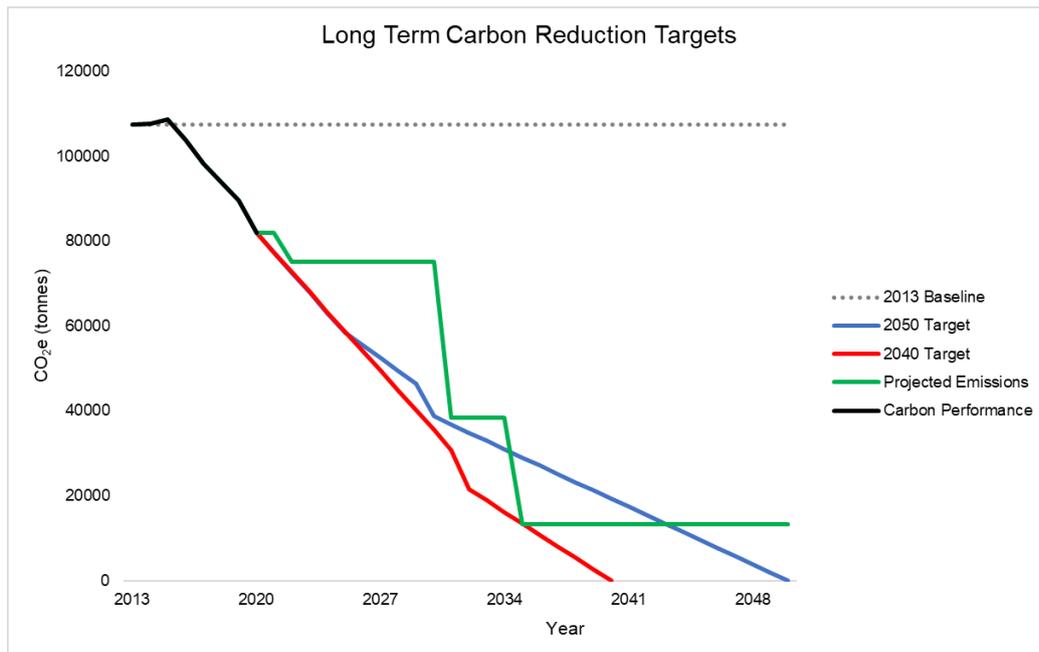


Figure 3: Projected Emissions Against the 2040 Net-zero Target

It is important to note that this modelling does not include any potential savings delivered through the implementation of the Green Plan actions or the potential savings that may be delivered by the Hospitals of the Future.

In order to meet the contractual requirement to achieve Net Zero operations, the Trust must capitalise upon all possible emission reduction opportunities. The HoTF project represents a significant part of the Trust’s carbon profile and it is considered to be necessary to capitalise upon the energy supply emission reduction offered through the use of a green energy source to supply the building. Failing to do this carries the risk of putting the Trust’s Net Zero ambition and legal obligations beyond reach.

The redevelopment is committed to ingraining sustainability into the design and operation of the new hospitals to improve efficiency and help us achieve net-zero. The development has set a target of achieving an “Excellent” rating on the BREEAM standard, this rating means that more than 70% of the requirements established by the BREEAM standard will need to be incorporated in the design and construction of the HoTF. Therefore, by incorporating BREEAM into the design, carbon emissions are expected to decrease over the life span of the new hospitals and pathology centre. LTHT are working to include efficient technology, natural ventilation and light, modern construction methods, green spaces and other methods to ensure this is a sustainable hospital that will meet the needs of our community.

The remaining 32% carbon reduction that needs to be achieved (according to projections) will be delivered in part by the Green Plan actions. Green Plans will be acted on and periodically reviewed (every 2 years) to update actions and increase sustainability measures at the Trust. Furthermore, over the next two decades the Trust will capitalise on new technology and innovation that will enable actions to be implemented that will create further reductions.

Once the Trust has reduced emissions as far as possible, we will then rely on innovation and the continued market development and availability of new technologies to reduce the residual emissions to zero.

The Net Zero Carbon Energy Reduction Strategy, (currently underway), will be the overarching Trust wide document, for a staged approach of Individual decarbonisation strategies for the LTHT sites.

The strategy will be aligned with other approved strategic documents/future plans, including the Trust Green Plan, HoTF, the SJUH master plan and policies from IHEEM and NHSE/I. The purpose of the strategy is that it can be used by any future client or project team as a blueprint for:

- Why we need to act
- The scale of transformation required
- How we need to approach interventions and projects
- What we need to focus on
- When we need to take action

Through the development of a refined LTHT digital based software tool (MOATA NZC), E&F can develop scenario planning, to present the Trust with a roadmap of costed options of targeted investment to achieve Net Zero by 2040. Supported by the ease of visualisation of the impact at site/building level, across the Trust portfolio.

The application of the MOATA NZC model at LTHT, will be utilised to -

- Measure current performance across the Estate
- Target, identify & align with Green Plan, ICS and Trust ambitions
- Assess quantum of intervention required
- Establish trust wide decarbonisation strategy and priorities
- Identify building level technologies and interventions
- Low regret investments (capital and savings)
- Outlines the role of different technologies
- Identify capital investment requirements and phases
- Assess impact of Trust wide renewables and energy procurement

The Sustainability team has engaged PWC to undertake an audit of the Green Plan and carbon emission data to provide external validation and assurance on the progress made to date.

The Greener NHS Team have begun to develop metrics for measuring progress with carbon reduction in across the country. Initial results from the dashboard has shown that we are demonstrating a higher performance than average trusts; we are within the 29% of the NHS Trusts to have a board approved Green Plan.

5. The Sustainable Action Plan

The Green Plan is underpinned by the Sustainable Action Plan, a comprehensive list of 106 actions which were formulated using a combination of the remaining actions from the Sustainable Development Management Plan, suggestions following engagement from colleagues, the results from the Sustainable Development Assessment Tool and actions that

have been successfully implemented at other trusts. The actions are spread across 10 key categories and ensures that sustainable practices are fully embedded across the organisation.

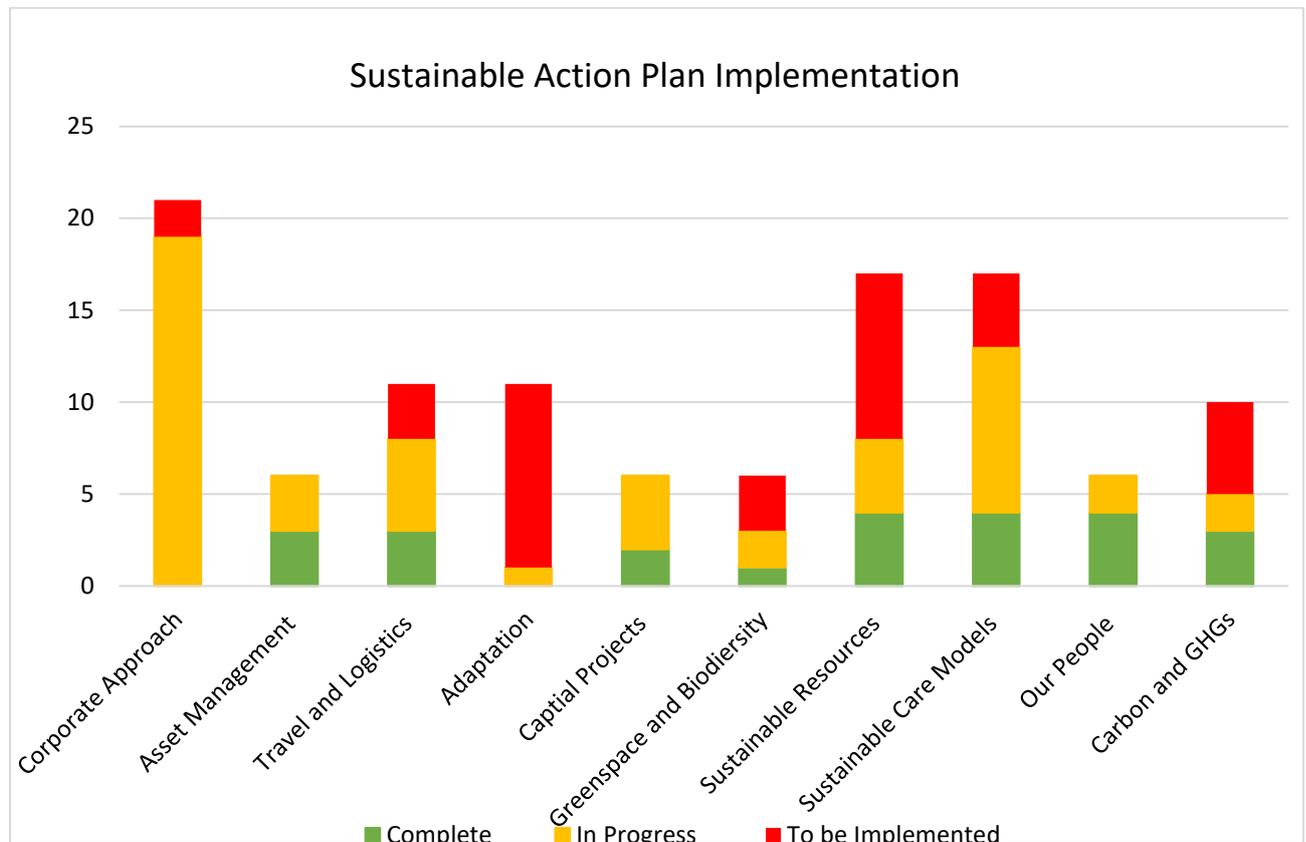


Figure 4: Progress against the LTHT Sustainable Action Plan

Many of the tasks in progress are partially completed or nearing completion. Several of the actions in the plan also require continuous intervention and activity. Therefore, most of these actions (71%) have been completed or nearing completion. The actions that have not yet been implemented will be implemented throughout the remainder of 2021 and 2022.

6. Key Interventions

The Trust has completed a number of sustainability interventions and initiatives across the year which have realised carbon savings, improved social value and cost savings.

Sustainable Theatre Programme (STP)

The Trust's STP have met regularly throughout the 2021/22 to identify ways that the environmental impact of the Trust's theatres and anaesthesia can be reduced. Research has been undertaken to identify areas where reusable items could be used instead of single use items, such as reusable laryngoscopes or sharps bins, to reduce the quantity of resources consumed by the Trust. The programme has also worked to share the best practice of the successful reduction in anaesthetic gas emissions with other Trusts. The Sustainable Theatres Programme is currently supporting the development of Carbon Literacy training

materials to be provided to Theatres colleagues to improve sustainability in theatres and drive a reduction in emissions through behavioural change.

Investing in Greener Energy and Efficiency Measures

To reduce carbon emissions in line with the 2040 target trajectory, the Trust have explored the option of producing renewable energy onsite and procure 100% renewable electricity. The Trust was successful in obtaining £13 million from the Public Sector Decarbonisation Scheme. Energy works undertaken as part of the scheme include; the use of air source and water source heat pumps, a connection to the Low Carbon District Heating Network, installation of solar Photo Voltaics, glazing and roofing improvements, Building Management System improvements to allow for energy efficient strategies to be implemented and the installation of LED lighting across the Estate.

Embedding Sustainability into business cases

The Trust are working to incorporate sustainability into business cases. A business case template which includes consideration of sustainability as a factor of quality is currently being developed.

Waste Management

Waste minimisation targets have been set across the Trust and we are working with our supply chains to reduce incoming materials that will end up as waste, such as packaging. The Trust has implemented a reusable sharps container which has resulted in a reduction in 80 tonnes of plastic waste per annum. Reviews have been conducted and clinical staff have been consulted on the cost/benefit of multi-use instruments vs. single-use instruments. The outcome of these reviews will be used to develop the guidance for the Trust. The Trust has purchased a Sterimelt system to recycle and recover single use plastic PPE and produce plastic blocks which can be reused in plastic manufacturing of new components. The Trust also now use a cardboard compacter to improve cardboard recycling. The use of skips has been ended, with all waste usually put in skips now recycled.

Anchor Institution

The Trust is working to use our influence as a large institution within the city through embedding social and environmental criteria into procurement contracts and inclusion of the TOMES criteria into the HoTF contract.

Healthy Workplace

To improve our workplace, we have actively promoted schemes that could improve staff wellbeing. We have promoted healthy choices to staff such as smoking cessation services and are working to monitor the progress of our health and wellbeing schemes.

Partnership Working

To explore the implementation of a systems-based approach to healthcare, we are actively working with Net Zero Board lead and Operational Climate Change Network the Leeds Anchors Sustainability Taskforce (LAST) group. This group brings together the Trust, Leeds CCG and local authorities to collaborate on sustainability.

7. Key Achievements

Carbon Literacy

The target to become net-zero by 2040 is extremely challenging and will require action across all staff groups of the Trust, if it is to be met. Consequently, our efforts have focussed on integrating sustainability training into the workforce. A Carbon Literacy training package has been developed which is designed to educate and empower all colleagues to take meaningful actions in their work to reduce carbon emissions. Carbon Literacy training is an externally accredited training programme designed to educate colleagues about climate change and carbon emissions. Individuals who successfully complete the training will become accredited as “Carbon Literate”. Once enough individuals successfully complete the training, the Trust will become a “Carbon Literate” organisation.

The training programme is being rolled out on a department-by-department basis. The first 5 training sessions were completed successfully with training delivered to over 78 senior colleagues within the Estates and Facilities department. A training programme is now being developed to be delivered to the senior Theatres and anaesthesia department. Following the completion of the E&F training, Trust is the first NHS Trust to become carbon literate in the world.

<https://www.leedsth.nhs.uk/about-us/news-and-media/2021/10/28/leeds-teaching-hospital-trust-becomes-the-first-nhs-trust-to-become-officially-carbon-literate>

Awards

Our efforts to improve sustainability throughout the Trust have been recognised through the nomination of several awards. The Sustainability Team at LTHT has been nominated for a HSJ Environmental Sustainability award, NHS Sustainability Award and three Business Green Leaders Awards for Employee Engagement Campaign of the Year for the Carbon Literacy training, Energy Efficiency Project of the year for LED Lighting, and Net Zero Strategy of the Year for the Green Plan. We have also won a Green Apple Award for the work undertaken to reduce the use of the anaesthetic gas Desflurane which has a very high global warming potential.

<https://awards.hsj.co.uk/shortlist-2021>

<https://www.sustainabilitypartnerships.uk/awards>

<https://event.businessgreen.com/leadersawards2021/en/page/2021-shortlist>

<https://thegreenorganisation.info/greenawards/>

Successful Bid for Decarbonisation Funding

In the autumn of 2020, the government announced that it was introducing the Public Sector Decarbonisation Scheme (PSDS). Under this scheme all public sector organisations were able to bid for an element of the available £1bn grant funding. The aim of the scheme is to boost economic output and to help the green agenda across the public sector.

In order to comply with the requirements of the scheme each bid had to show significant carbon reductions, with clear guidelines on the types of carbon reduction initiatives that would be considered. The Trust sustainability team worked with the capital team and our energy partners at SJUH (Vital Energi Ltd.) to submit bids. The £13m bid for LTHT has been successful and the proposal has been calculated to reduce the Trust’s annual carbon emissions by around 3,716 tonnes of CO₂e and contribute to delivering the Trust’s Net Zero Carbon target by 2040.

Reducing Impacts from Travel

To tackle air pollution, the Trust has entered into a contract with Leeds City Council to lease our fleet. This contract will ensure that all fleet vehicles are low emissions and will help us

meet our air pollution targets. In addition to developing a Sustainable Travel Plan, the Trust has run the '1 day a week' campaign to reduce car travel and enable remote working and services.

Due to Covid-19, between 23rd March and April 2021, 17,000 consultations were completed remotely using the *Attend Anywhere* platform. This has saved over approximately 100tCO₂e. The response to the pandemic has accelerated the use of this programme, and we are continuing to use this platform and aim to increase its use to provide accessible remote appointments to more patients. Enabling remote consultations allows greater flexibility for patients and staff which improves the resilience of our services. The Trust has also promoted the use of virtual meeting technologies such as Microsoft Teams which have been used within the Trust as well as with our partners involved in the Leeds sustainable travel programme.

The Procurement Team are exploring the option of consolidating deliveries by creating a centralized receipt and distribution area for the Trust. This would reduce annual deliveries from 15,000 to approximately 5,000 delivery movements.

Sustainable Models of Care

The Trust's Emergency and General Surgery Team competed and won the Centre for Sustainable Healthcare's Green Surgery Challenge. The team competed against four surgical teams from across the UK, working on projects that promote environmental and socially sustainable ways of practising. Their project focused on using a gasless procedure for laparoscopic appendectomy, by carrying out a real-time cadaveric study of a new device developed by the National Institute for Health Research (NIHR) Global Health Research Group for Surgical Technologies (GHRG-ST).

The RAIS device mechanically creates a space within the abdomen to allow surgery to be carried out, rather than using medical gas, which is the largest contributor to the overall carbon footprint of the procedure. In addition to the RAIS device, they were able to eliminate the unnecessary sterilisation of reusable surgical equipment and reduce the use of consumables, with the number of instruments per procedure reducing from 119 to 49. The project is forecasted to save 110.3 tonnes of CO₂e and £88,695 a year. [Green Surgery Challenge 2021](#)

Staff Engagement

The Trust has launched a staff rewards programme which informs staff about sustainability initiatives across the Trust and allows them to track their own actions and the carbon savings that they have contributed through environmental decisions. There are currently 391 members of staff signed up.

8. LTHT Response to COP26

Carbon Literacy Day of Action

To mark the start of COP26 on November 1st, the Trust provided Carbon Literacy training to the board leads across West Yorkshire and Harrogate ICS. Those who participated included those from Trusts such as Bradford, Leeds, Airedale, Durham and Darlington, Mid Yorkshire, and South West Yorkshire. The training was used to educate leaders within the ICS on climate change and sustainability, share the best practice of the Trust, and promote partnership working on these issues.

The session was received very positively and saw some constructive discussions focused on sustainable changes that could be made across departments and Trusts. Each attendee created an individual and a group action pledge to become certified as 'carbon literate.' Individual actions centred around lifestyle changes, collective action, calculating carbon footprints, and researching sustainable alternatives. Group actions entailed sharing best practice across sustainability champion networks, offering carbon literacy training to colleagues, launching competitions, and communicating with suppliers. We are now the first ICS to have completed Carbon Literacy training, and hope that many more will follow.

<https://www.leedsth.nhs.uk/about-us/news-and-media/2021/11/05/carbon-literacy-day-of-action-in-west-yorkshire-and-harrogate>

Green Ward Competition

The Green Ward Competition was launched in October, this is a leadership and engagement programme by the Centre for Sustainable Healthcare to transform healthcare by cutting carbon, improving patient care & staff experience, and saving money. Colleagues have been invited to enter the competition but submitting project ideas that could improve the sustainability performance of their area. Six projects will then be selected, with workshops starting in January and the projects running from March 2022 for 10 months. These projects will help integrate sustainability into clinical areas and work as pilots to demonstrate how these changes can be replicated across the organisation.

Senior Pledges for Commitment to become one of the Greenest Trusts

To mark the commitment of the senior team to achieving our net zero goals, each of the Executive Directors has made a personal pledge for action.