



The Leeds  
Teaching Hospitals  
NHS Trust

# Green Plan 2020-22

Sustainable healthcare the Leeds Way

Issue 1.0





# Contents

1.0 Foreword	6
1.1 Highlights to date	7
2.0 Introduction	8
2.1 Sustainability at LTHT	8
2.2 Sustainability at a National level	8
2.3 Key Areas of Focus	8
3.0 Progress to date	9
3.1 Carbon Footprint	9
3.2 Difference between SDMP baseline and Green Plan baseline	11
3.3 Electricity	12
3.4 Gas	13
3.4.1 Gas and Electricity	14
3.5 Oil	14
3.6 Water	14
3.7 Waste	15
3.6.1 Clinical Waste	15
3.6.2 Non-Clinical Waste	15
3.8 Anaesthetic Gases	15
3.9 Carbon emissions per patient	16
3.10 Progress against the SDMP	17
3.10.1 Carbon Reduction	18
3.10.2 Air Pollution	19
3.10.3 Waste	20
3.11 Strategic Sustainability Management Group	20
3.11.1 Carbon Reduction	20
3.11.2 Completing our journey	21
3.11.3 Air Pollution	22
3.11.4 Waste	22
3.11.5 Sustainable Development Assessment Tool	22

4.0 Objectives and targets	23
4.1 Sustainability Drivers	23
4.2 The Targets we will adopt	24
4.2.1 Carbon Emissions	24
4.2.2 Air Pollution	25
4.2.3 Plastics and Waste	26
5.0 A pathway to carbon net zero	27
5.1 The transition from natural gas to hydrogen	27
LTHT Net Zero Key Action timeline	28
5.2 Adopting Electric Vehicles	31
5.3 The impact on our carbon footprint	32
5.4 Building the Leeds Way	33
5.5 The Trust as an Anchor Institution	34
6.0 Our sustainable action plan	35
LTHT Sustainable Action Plan	36
6.1 Corporate Approach	38
6.2 Asset Management and Utilities	38
6.3 Travel and Logistics	38
6.4 Adaptation	39
6.5 Capital Projects	39
6.6 Greenspace and Biodiversity	40
6.7 Sustainable Care Models	40
6.8 Our People	41
6.9 Sustainable Use of Resources	41
6.10 Carbon and Greenhouse Gases	42



## 1.0 Foreword

*“Leeds Teaching Hospitals NHS Trust recognises the enormous challenge that the issues of climate change, air pollution and waste present to the City of Leeds and the impact that these issues will have on our patients. Our Trust has already undertaken excellent work to address these issues through our previous Sustainable Development Management Plan (SDMP) and I welcome this new Green Plan, which builds upon our progress so far. Climate change represents a significant health challenge for the 21st century and this Green Plan details a proactive approach that our Trust can take to do our part to reduce the impact that climate change will have on the people of Leeds.*

*As a Trust we seek to operate in the Leeds Way and I firmly believe that making our Trust as environmentally, economically and socially sustainable as possible helps us to fulfil this aim. Implementing the actions presented within this Green Plan will help ensure that the Trust is creating the best environment for our staff and patients.*

*As one of the largest organisations in Leeds, operating across 5 major sites, we create a significant environmental footprint through our carbon emissions, contribution to air pollution and production of waste materials. This comprehensive strategy will enable us to reduce our contribution to these three factors and will help to mitigate potential impacts of climate change.*

*We need to embed sustainability within our organisations and must work together with our partners across the city and the NHS to improve sustainability. We will collaborate with our partners to help meet our own internal objectives and also the wider city level 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.”*



**Julian Hartley**  
Chief Executive Officer

## 1.1 Highlights to date

**Carbon - 4943 Tonnes** of carbon saved per annum through upgrade of the CHP units at St James and LGI.



**Staff engagement - over 2000 tonnes** saved by initiatives Grasp champions working to reduce environmental impacts across the Trust.

**Energy - £727K invested** in energy saving schemes



**Anaesthetic gases - 4044 tonnes of carbon saved** through switching anaesthetic gases from Desflurane to Sevoflurane



**Travel - 100%** of Trust shuttle buses are now low or ultra low emission



**Water - £329000 saved** through employing leak detection techniques to save water and carbon and money



**Building design - target of excellence** BREEAM standard for the BtLW hospitals



**Waste - £270K saved** by sending offensive stream to waste to energy also saving 280 tonnes of carbon



**Excellence - shortlisted** for BMJ 2020 Environmental Sustainability and Climate Action Award



## 2.0 Introduction

The Leeds Teaching Hospitals NHS Trust (the Trust) 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, as well as 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.

### 2.1 Sustainability at LTHT

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, the City of Leeds, the UK and beyond.

The Trust have recognised the need to incorporate sustainability into our activities since 2011, with the adoption of a carbon management plan. A second SDMP was then adopted in 2018, updating the objectives and commitment to sustainability priorities. The Trust has a sustainability team within the Estates and Facilities department, including a dedicated Sustainability Manager, Energy Manager and Waste Manager. This team work to progress the sustainability agenda at the Trust and to implement the aims, ambitions and objectives established within the previous SDMP and now in this Green Plan.

Section 3 of this Green Plan, "Progress to Date", provides a summary of the work that has been done by the Trust to achieve the ambition of becoming one of the Greenest Trusts in the UK.

### 2.2 Sustainability at a National level

In January 2020, Sir Simon Stevens the CEO of NHS England announced the "For a Greener NHS" campaign. This campaign seeks to provide high-level backing for the NHS to adopt sustainability measures in an effort to combat the issue of climate change.

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 and the Royal College of Nursing.

The UK is committed to becoming carbon-neutral by the year 2050, as per the Climate Change Act 2008. The national NHS targets and targets within this Green Plan are derived from the Climate Change Act 2008.

As part of the For a Greener NHS Campaign, an expert panel has been commissioned to review how the NHS can achieve Net Zero as soon as possible. The Trust will continue to monitor these findings and review and update this plan accordingly.

### 2.3 Key Areas of Focus

This Green Plan is designed to enable the Trust to:

- Reduce our total carbon emissions (through consumption of fuels, energy, and materials consumption)
- Reduce our contribution to air pollution
- Reduce our use of plastic and improve recycling

These 3 key areas of focus are derived from national policy and guidance and are explored further in Section 4 "Sustainability Drivers". Section 5 explores how the Trust will move towards a carbon net-zero target by 2050. Finally, Section 6 provides an overview of our Sustainable Action Plan.

## 3.0 Progress to date

Since 2011 the Trust has engaged in a significant programme of activity to manage and reduce our carbon emissions, mitigate our impact on air pollution and improve recycling performance. Since 2017 and the adoption of the previous SDMP, there has been a renewed focus on sustainability at all levels of the organisation. This section reviews how the Trust has performed against its previous objectives and the actions that we have implemented to improve our sustainability.

### 3.1 Carbon Footprint

The Trust's carbon footprint is measured by recording annual emissions of carbon dioxide equivalent (CO<sub>2</sub>e) emissions. The Trust utilises our CO<sub>2</sub>e emissions for the financial year 2013-14 as our baseline, against which all subsequent years will be compared. In 2013-14 our carbon footprint was 107,501 tonnes of CO<sub>2</sub>e (tCO<sub>2</sub>e). This baseline figure was

established by combining measured emissions and estimated emissions where primary data is unavailable. Improving our measurement of carbon baseline was an action within the previous SDMP, and we have made progress in this regard. These figures are presented in Tables 1 and 2 below.

The measured data presented in Table 1 is calculated by multiplying actual consumption data (e.g. kWh electricity) by a carbon emission conversion factor. All carbon conversion factors (except for anaesthetic gases) are sourced from the Department for Business, Energy and Industrial Strategy (BEIS) greenhouse gas reporting figures.

The figures presented in Table 2 are estimated and were used to develop the original carbon baseline for the Trust's previous SDMP. Therefore, these figures have been reincorporated into our overall carbon footprint, as seen in Table 3, The estimated figures (Table 2) have been added to the measured figures (Table 1) to calculate the overall carbon footprint (Table 3).

*Table 1- Carbon footprint for LTHT based on actual data only 2013-14 (all data in tCO<sub>2</sub>e)*

Year	Electricity	Gas	Oil	Water	Clinical waste	Non-clinical waste	Anaesthetic Gases	Fleet Vehicles	Total
2013 - 14	9,957	56,254	27	760	3,952	1,458	7,848	97	<b>80,354</b>

*Table 2- Carbon footprint for LTHT based on estimated data from NIFES consultancy report 2010-11 (all data in tCO<sub>2</sub>e)*

Year	Business Travel	Patient Transport	Visitor Travel	Commuting	Total
2010-11	4,412	1,843	1,545	19,347	<b>27,147</b>

Table 3- LHT annual carbon emissions (all data in tCO<sub>2</sub>e)

Year	Measured Total	Estimated Total
2013-14	80,354	107,501
2014-15	80,525	107,672
2015-16	81,534	108,681
2016-17	76,640	103,787
2017-18	71,072	98,219
2018-19	69,551	96,698
2019-20	62,894*	90,041*

\*The totals for 2019-20 does not include data for clinical and non-clinical waste as this data comes from Estates Return Information Collection (ERIC) reporting and this information is not yet available. The average annual CO<sub>2</sub>e emissions for clinical waste and non-clinical waste have been applied to the totals.

Table 3 shows a clear reduction of the Trust's annual carbon footprint. Between 2013/14 and 2019/20 our Estimated Total emissions have reduced by 16% from 107,501 tCO<sub>2</sub>e to 90,024 tCO<sub>2</sub>e.

Our previous SDMP set the objective of reducing our annual carbon footprint by 28% by the year 2020, compared to the 2013-14 baseline. Table 3 and the accompanying analysis indicates that Trust was not successful in achieving this target. The emission reduction achieved fell 12% short of this target.

An important consideration is that the interim target of a 28% reduction by 2020 is only an interim target, and that the Trust continues to work towards a 100% reduction by 2050. The interim target serves to check that the overall trajectory of carbon emissions reduction is progressing at a suitable rate to achieve the 2050 target. The Trust's "Pathway to Net-Zero" is discussed in detail in Section 5.

Table 4 compares the Measured Total carbon footprint for the baseline year (2013-14) and the most recent year (2019-20), in which the 31% reduction was achieved.

Table 4- comparison in measured total tCO<sub>2</sub>e between baseline (2013-14) and most recent year (2019-2020) excluding clinical and non-clinical waste

Year	Electricity	Gas	Oil	Water	Anaesthetic Gases	Fleet Vehicles	Total
2013-14	9,957	56,254	27	760	7,848	97	<b>74,943</b>
2019-20	15,951	36,715	18	649	3,803	254	<b>57,372</b>
Difference	+5,994	-19,539	-9	-111	-4,045	+157	<b>-17,589</b>

The following subsections provide details pertaining to the reasons for the changes in CO<sub>2</sub>e emissions presented in Table 4.

## 3.2 Difference between SDMP baseline and Green Plan baseline

In our previous SDMP we reported that our overall carbon baseline was 99,464 tCO<sub>2</sub>e. Since the SDMP was authored in 2016, we have reviewed and improved our data gathering and analysis methodology, leading to the increase in our measured baseline

emissions. Reviewing and improving our baseline data and our methodology was, and is, an intervention within our Sustainable Action Plan, to ensure that we are as accurate and transparent in our figures as possible.

Table 5 presents a comparison between the baseline presented in the SDMP and the updated and improved baseline in the Green Plan.

Table 5 - Comparison between SDMP baseline and Green Plan Baseline

Plan	Year	Electricity	Gas	Oil	Water	Clinical waste	Non-clinical waste	Anaesthetic Gases	Fleet Vehicles	Total
Green Plan	2013-14	9,957	56,254	27	760	3,952	1,458	7,848	97	<b>80,354</b>
SDMP	2013-14	36,965	26,478	n/a	710	2,402	1,463	4,165	136	<b>72,319</b>

The most significant differences are seen in the emissions from electricity and gas. This difference is due to a change in how we have measured our use of these utilities. Previously, we reported the total amount of electricity and gas that was used across our estate, after gas had been used in the Combined Heat and Power units (CHPs) to generate onsite electricity. The Green Plan figures are calculated using the amount of electricity and gas that has been imported from the grid and prior to use in the CHPs. This decision was taken to improve the accuracy and reliability of the data. Under the SDMP figures, electricity and gas combined to emit 63,443 tCO<sub>2</sub>e. Under the Green Plan figures, this combined figure is 66,211 tCO<sub>2</sub>e a difference of 4%. This is relatively small overall change in total emissions, the more significant change is the split between gas and electricity. This change in split is to be expected, since the majority of electricity used on site is generated from the combustion of imported gas in our CHPs.

Oil consumption was not previously reported in our baseline, therefore, by incorporating this fuel into our baseline we have improved the accuracy of our total impact.

Emissions (CO<sub>2</sub>e) from our use of water have increased from 710 tonnes in the SDMP to 760 tonnes in the Green Plan. This change is the result of a review of the accuracy of previous data and a subsequent amendment.

Likewise, the clinical waste emissions have increased from 2,402 tCO<sub>2</sub>e to 3,952 tCO<sub>2</sub>e (an increase of 64%). This is due to a review of the accuracy of our previous data set. Unfortunately, a mistake in the data was identified and clinical waste emissions were underreported in the SDMP. This has been corrected in the Green Plan.

### 3.3 Electricity

There has been a significant increase in the import of electricity at the Trust. In 2013-14 the Trust imported approximately 20.5 million kWh and in 2019-20 this rose to approximately 57.5 million kWh. Figure 1 demonstrates the significant increase in imported electricity consumption over this time period.

The two main hospital sites, St. James' University Hospital (SjUH) and Leeds General Infirmary (LGI) both utilise combined heat power (CHP) stations to generate heat and power from natural gas. One of the key interventions from the previous SDMP was to refurbish and upgrade the CHPs through the Guaranteed Savings Contract (GSC) to improve efficiency and deliver carbon savings. In order to replace the old CHPs and commission their replacements, they were required to be taken offline. As a result, demand for electricity imported from the grid increased.

Despite the significant increase in demand for import of electricity from the grid (an increase of 179%) the associated carbon emissions have increased to a much lower

extent. In 2013-14 CO<sub>2</sub>e emissions from import of electricity totalled 9,957 tonnes. In 2019-20 the CO<sub>2</sub>e emission totalled 15,951 tonnes or an increase of 60%. This is due to a significant reduction in the carbon intensity of imported electricity. In the baseline year, each kWh of electricity used created 0.48357 kgCO<sub>2</sub>e. In 2019-20 the carbon emission factor had almost halved to 0.2773 kgCO<sub>2</sub>e.

It is expected that in 2020 the CHP units will resume at full capacity, which will enable the Trust to return to producing the majority of its electrical demand through the CHPs, in line with its long term contractual obligations. Accordingly, it is expected that the level of electricity imported from the grid will reduce and associated CO<sub>2</sub>e emissions will decrease (this decrease will be balanced by an increase in gas emissions as discussed in latter sections). Figure 2 models expected future level of CO<sub>2</sub>e emissions from the import of electricity at the Trust. In 2020-21 it is expected that annual emissions will decrease to 6,357 tCO<sub>2</sub>e. However, the exact figure will be determined by actual demand and may also be impacted by any further changes to the carbon intensity conversion factor.

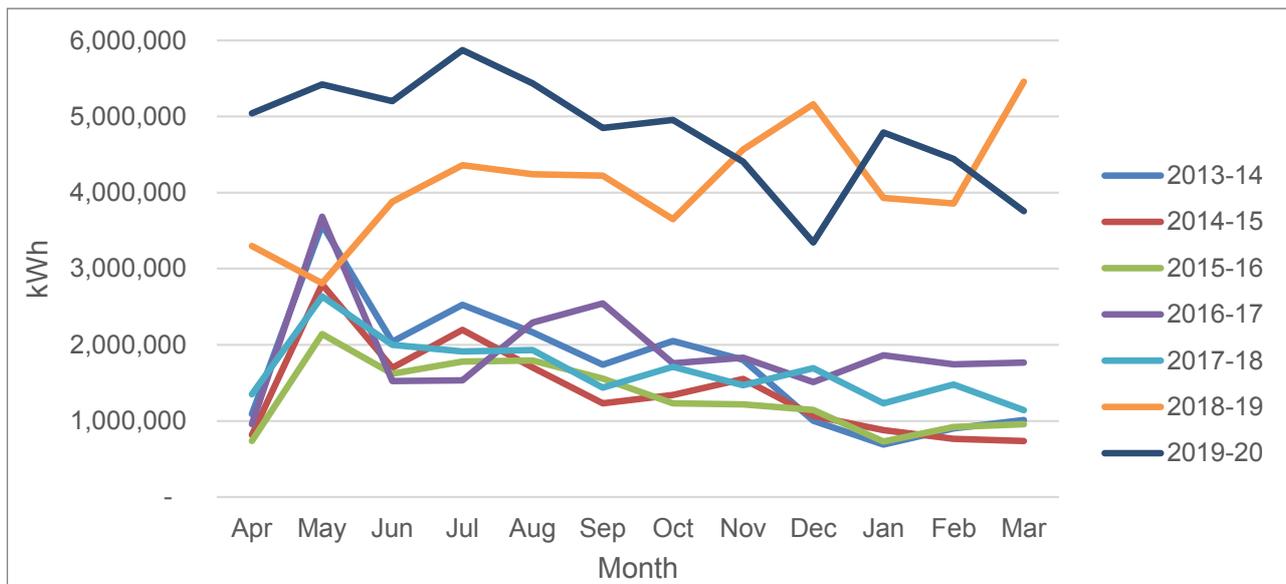


Figure 1- Trust wide Electricity Usage per month

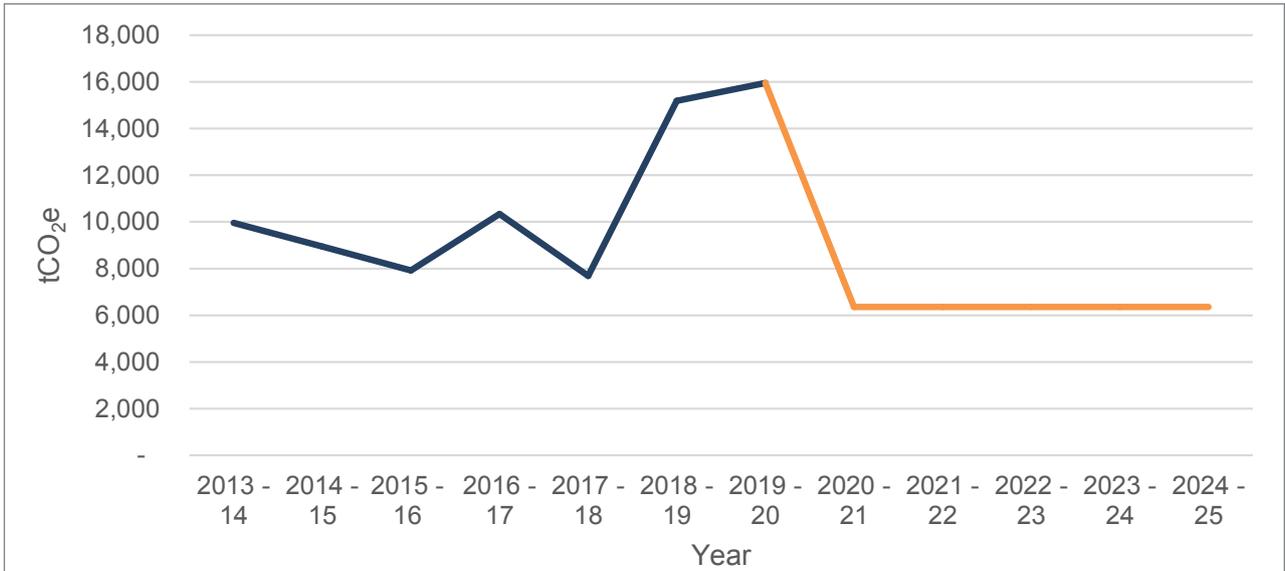


Figure 2 - Predicted CO<sub>2</sub>e emissions from electricity import from 2020 - 2025

### 3.4 Gas

In contrast, gas consumption at the Trust has decreased significantly due to the refurbishment of the CHP units (Figure 3). In 2013-14 the Trust imported approximately 305.5 million kWh and in 2019-20 this decreased to approximately 200 million kWh. Figure 1 demonstrates the significant increase in electricity consumption over this time period.

In 2019-20 the Trust imported 35% less gas than it did in the baseline year. This resulted in a commensurate decrease in

CO<sub>2</sub>e emissions of 35%. In the baseline year total emissions from importing gas equalled 56,254 tCO<sub>2</sub>e and in 2019-20 totalled 36,715 tCO<sub>2</sub>e.

Whilst this has a clear environmental benefit, there are significant economic impacts. Through use of the CHPs, the Trust can generate electricity at a cost of £0.05/kWh. Whereas, to purchase electricity from the grid costs £0.15 /kWh, providing a significant financial incentive for the Trust. Therefore, once the CHPs are fully operational, the carbon reduction savings will not be maintained.

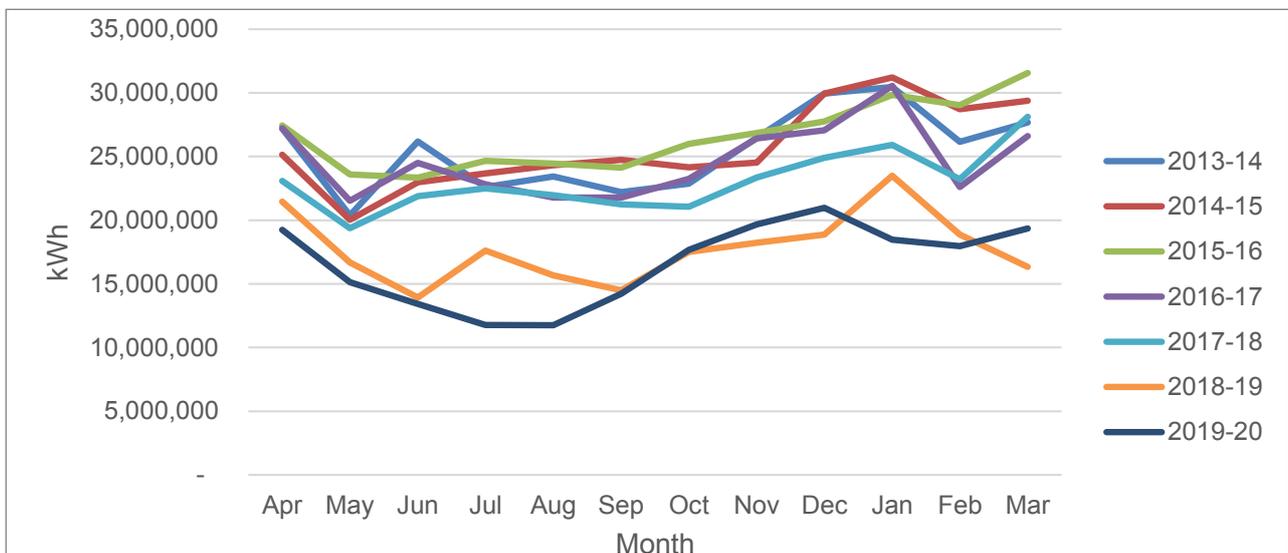


Figure 3 - Actual and predicted CO<sub>2</sub>e emissions from gas consumption at the Trust

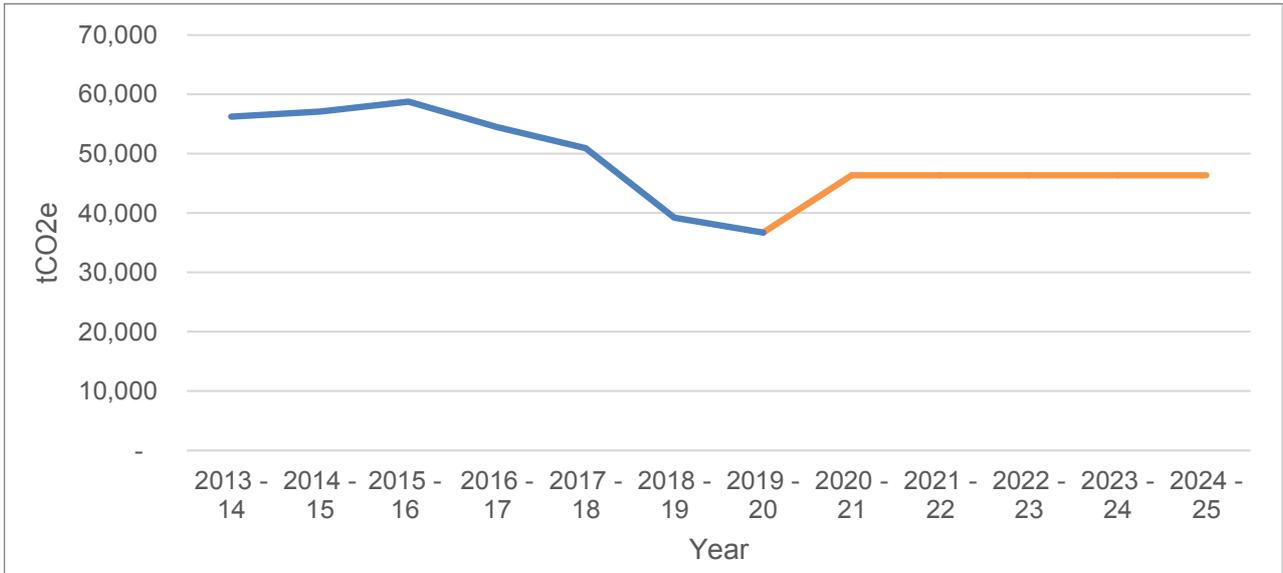


Figure 4- Predicted CO<sub>2</sub>e emissions from Gas import from 2020 - 2025

Figure 4 presents predicted future CO<sub>2</sub>e emissions from import of gas at the Trust.

The modelled scenario suggests that CO<sub>2</sub>e emissions from the import of gas to the Trust from 2020 onwards will increase to approximately 46,000 tCO<sub>2</sub>e/annum. This takes into account the predicted savings in CO<sub>2</sub>e emissions delivered by the upgrade of the CHPs at SJUH and LGI.

### 3.4.1 Gas and Electricity

The future modelled scenario suggests that CO<sub>2</sub>e emissions from import of electricity will decrease by 6,357 tCO<sub>2</sub>e and the emissions from import of gas will increase by 9,657 tCO<sub>2</sub>e. Therefore, the modelled net change between 2019-20 and 2020-21 will be an increase of 3,300 tCO<sub>2</sub>e.

## 3.5 Oil

Oil is not used as primary source of energy at the Trust. Oil is only used in contingency situations when gas and/or electricity supply is interrupted. In this instance, diesel generators automatically kick-in to continue power supply to the Trust's sites. Therefore, annual consumption of Oil and any associated emissions, are not subject to any reduction interventions. It is possible that

aside from mandatory testing of the engines, that in a given year a total or zero litres of oil will be consumed if the main gas/electricity supply is not interrupted.

## 3.6 Water

Carbon emissions from the use of water at the Trust have been reduced since the baseline year. In 2013-14 emissions totalled 760 tCO<sub>2</sub>e/annum (Figure 5). In 2019/20 this had been reduced by 15% to 649 tCO<sub>2</sub>e/annum.

This saving has been achieved via the employment of a contractor to perform leak prevention services which include the detection and repair of potential pipe leaks points before they arise, saving water. This has also saved the Trust money, by removing the cost of wasted water from leaks.

However, the savings achieved are greater than the comparison between baseline year and 2019-20 figures suggest. CO<sub>2</sub>e emissions from water consumption peaked at 886 tonnes in 2016-17. Leak detection services began in 2017-18 and this led to the position in 2019-20 of 649 tCO<sub>2</sub>e. In comparison to the peak, this intervention has delivered a saving of 27%.

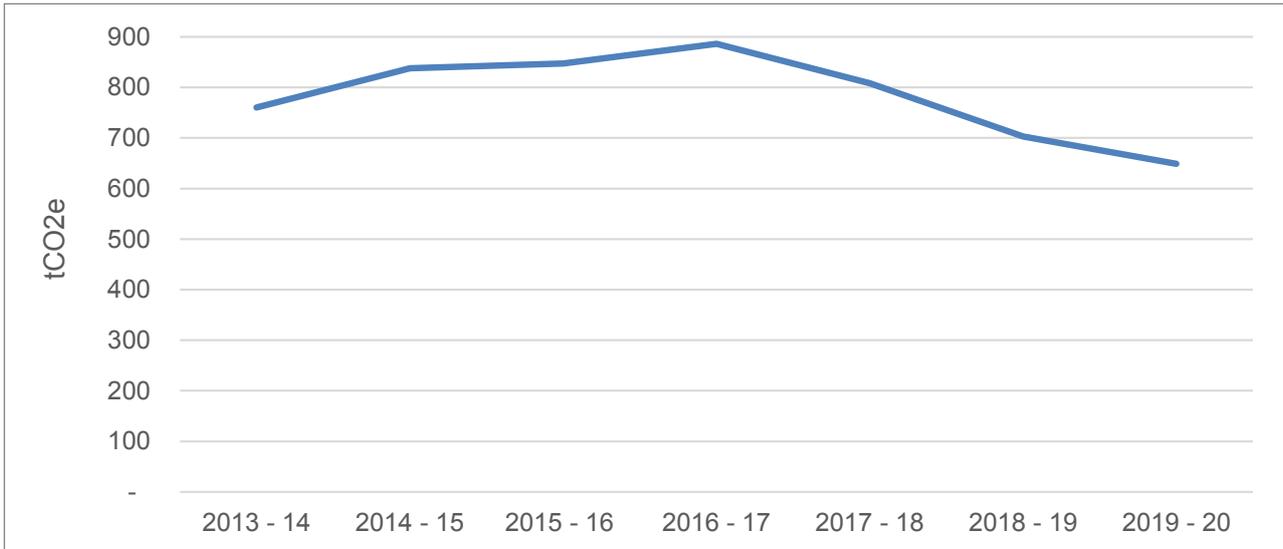


Figure 5 - CO<sub>2</sub>e emissions from water consumption at the Trust

### 3.7 Waste

Waste data is obtained from Estates Return Information Collection (ERIC) reporting. The ERIC returns for 2019-20 have not yet been completed. Therefore, all comparisons made are up to 2018-19 as this is the most recent dataset available.

#### 3.7.1 Clinical Waste

CO<sub>2</sub>e emissions have increased from 3,952 tCO<sub>2</sub>e in 2013-14 to 4,720 tCO<sub>2</sub>e in 2018-19, an increase of 768 tonnes. This increase is due to the increase in patient contacts over this time period. Over this period of time patient numbers have increased from 1,184,214 to 1,432,976. Every patient contact generates a quantity of waste that is unavoidable. The Trust is working to improve segregation practices to divert waste to the most appropriate waste stream which can have a significant impact on associate CO<sub>2</sub>e emissions.

#### 3.7.2 Non-Clinical Waste

CO<sub>2</sub>e emissions have increased from 1,458 tCO<sub>2</sub>e in 2013-14 to 2,823 tCO<sub>2</sub>e in 2018-19, an increase of 1,365 tonnes. As with clinical waste, the increase is attributed to the significant increase in patient numbers of the commensurate time period. The Trust is working to significantly improve provision of

recycling facilities across the estate in order to increase recycling and reduce associated CO<sub>2</sub>e emissions.

### 3.8 Anaesthetic Gases

The Trust has 56 operating theatres across its estate to carry out a wide-range of medical procedures. Operating theatres are located at SJUH, LGI, Chapel Allerton Hospital (CAH) and Wharfedale Hospital (WAR).

Medical procedures conducted within the operating theatres are often carried out whilst patients are under general anaesthetic. Patients are usually anaesthetised using the use of volatile agents, including Desflurane, Sevoflurane and Isoflurane. In the baseline year, the use of these three gases created 7,848 tCO<sub>2</sub>e. In 2019 – 20 total emissions from use of these gases has decreased by 52% to 3,803 tCO<sub>2</sub>e (Figure 6). This is a significant saving and has been achieved by encouraging anaesthetist colleagues to use Sevoflurane in place of Desflurane, where clinically appropriate. Sevoflurane has a Global Warming Potential (GWP) of 440, compared to Desflurane which has a GWP of 6,810. Therefore, the environmental impact of Sevoflurane is approximately 15 times less than that of Desflurane.

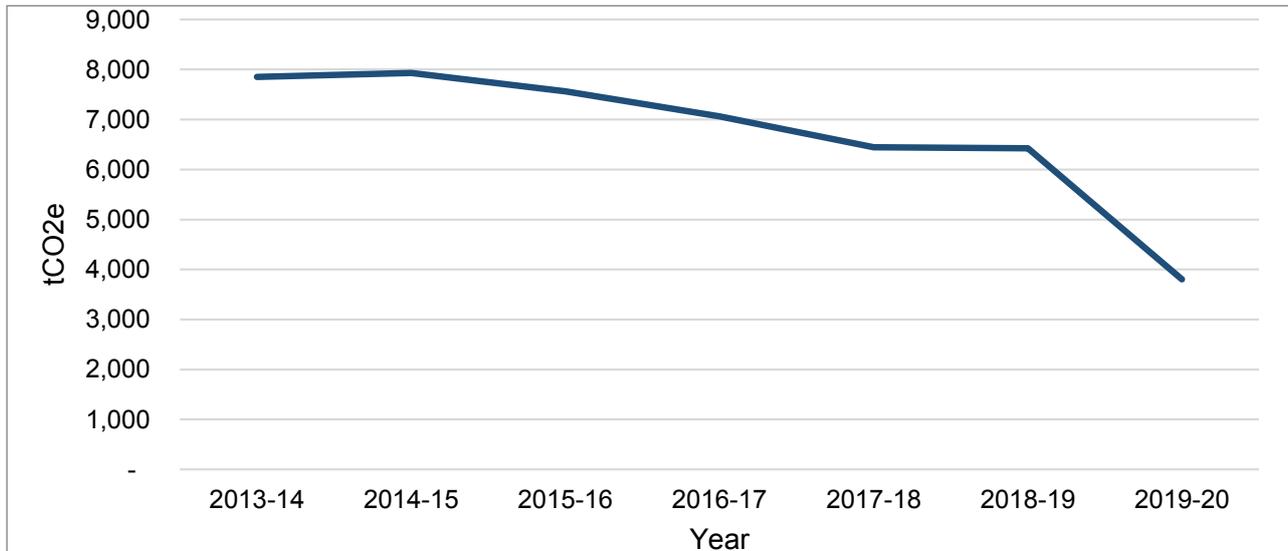


Figure 6 - CO<sub>2</sub>e emissions from anaesthetic gases at the Trust

As the use of anaesthetic gas is essential within the Trust, we are unable to reduce the emissions from the gases to zero. However, there is scope to reduce the emissions closer to zero by substituting Desflurane with Sevoflurane further. It should be noted that the intervention to reduce Desflurane consumption only began in September of the 2019-20 year, therefore, further reductions in emissions are possible. The team of anaesthetists whom championed this work have been nominated for a BMJ Award which is to be judged in October 2020.

### 3.9 Carbon emissions per patient

It is important to consider the number of patients treated when evaluating carbon reduction progress at the Trust, as patient numbers reflect the constantly changing scope of the organisation. The scope of works provided by the Trust are impacted as services are added and removed, premises are expanded or altered and overall patient numbers vary. Patient numbers provide a useful unit of productivity which enables the relative carbon performance to be understood, taking into account these factors.

As demonstrated by Figure 7, the number of patients in the baseline year was 1,184,214. By the year 2019-20 patient numbers had increased by 20% to 1,420,596. Therefore, it would be reasonable to expect that overall carbon emissions would also increase, due to increased demand for services, increased use of gas and electricity and other carbon emitting utilities. However, the opposite has occurred. In the baseline year, for each patient treated the Trust created 91 kgCO<sub>2</sub>e. In the year 2019-20 this figure had reduced to 63 kg/CO<sub>2</sub>e, a reduction of 31%.

This demonstrates significant improvements in efficiency, since whilst patient numbers have increased 20%, overall carbon emissions have decreased by 16% and carbon emissions per patient contact have decreased 31%. As and when the CHPs return to full capacity and gas import increases, it is likely that the CO<sub>2</sub>e per patient will increase from the level expressed in Figure 7.

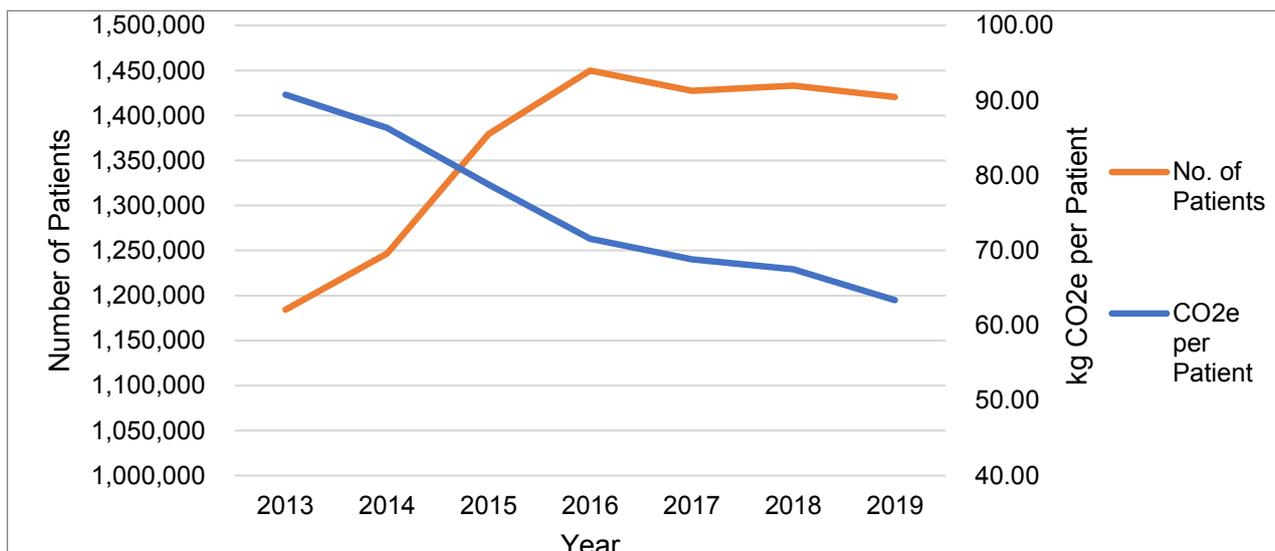


Figure 7- kgCO<sub>2</sub>e emissions per patient treated

### 3.10 Progress against the SDMP

Despite the comments regarding the reduced demand for gas, increased demand for electricity and the associated decrease in CO<sub>2</sub>e emissions, there has been a large amount of work completed on the sustainability agenda at the Trust since publication of the previous SDMP. The delivery of actions within the SDMP has served to deliver reductions in demand for utilities and helped create a more sustainable Trust.

The SDMP outlined 83 actions required to increase the sustainability of the Trust, 36 completed, 24 ongoing, 23 yet to begin. The LTHT board have demonstrated commitment to delivering the key principles of sustainability and environmental improvement and have worked to embed these principles into the operational processes of the Trust.

The Implementation of the SDMP has received the highest-level management support. Senior management and department leads have been regularly briefed on the progress of the sustainability initiative so that they can enable change and promote the programme, such as during multiple presentations at Team Brief. The board reviews the progress of the SDMP and Environmental Management System

on a quarterly basis through the Finance & Performance Board meetings. The Trust is also working to become accredited to the ISO 14001 standard for Environmental Management Systems.

To encourage a culture change within the Trust, the GRASP ('be Green, be Aware, be Sustainable, for our Patients) Champions have been used as a staff network, to promote sustainable behaviours throughout the organisation. GRASP colleagues have successfully led several environmental improvement initiatives in areas including waste, energy, water and travel. Through this they have gained knowledge and insight which they can then share with their colleagues to help spread low carbon behaviours. Sustainability and the GRASP campaign feature at least annually at the Chief Executive's team brief. To promote colleague engagement in sustainability and environmental issues the Trust has promoted 6 meetings per annum, providing opportunities for colleague contribution and dissemination of sustainability initiatives. Colleagues that have demonstrated sustainable behaviour have been recognised by the Trust, and their actions were showcased through the Time to Shine staff awards.

The Trust continues to explore and monitor the availability and suitability of new and innovative approaches to care, and have adopted these where appropriate alongside other considerations, for example the installation of the Scan for Safety project

The Trust has actively engaged in health and care sustainability events and initiatives, attending at least one event per quarter. This has helped the Trust establish a network of peer relationships with organisations progressing sustainability initiatives in the health and care sector, with whom prevailing approaches, innovation, knowledge and best practices can be shared. The Trust is part of the Leeds Anchors Sustainability Taskforce (LAST), a working group with representatives from all the main NHS organisations in Leeds. This group provides a platform for a systems-based approach to sustainability within Leeds and also as a platform to lobby government. The Trust also participated in the Health and Wellbeing Board to Board programme in 2019, which included a significant commitment to sustainability.

Working with organisations including Small-Medium Enterprises (SMEs), Community Interest Companies (CICs) and third sector organisations from the local area is important to the Trust, we now monitor the pool of suppliers and partners from these local organisational groups and have developed appropriate metrics to safeguard their appointment in future years.

In addition to this, the Trust have produced staff wellbeing metrics to analyse the link between wellbeing and social sustainability initiatives the Trust has promoted. The development of metrics on increasing or maintaining those undertaking workplace training with the Trust and the number of school visits made to the Trust annually have been useful in delivering the Trusts contribution to local training initiatives and training curriculums.

As part of a commitment to delivering healthy and resilient communities the Trust have been a key partner at Health and Wellbeing Group meetings alongside partners such as Public Health England and Leeds City Council. In

addition, the Trust have worked with other partner organisations in the city on several initiatives such as, the Leeds Medical School Green Impact Programme and the city-wide sustainable travel programme.

### 3.10.1 Carbon Reduction

The Trust has engaged in a series of interventions to reduce our carbon emissions. This section provides an overview of select interventions that have been enacted in this regard. The majority of these interventions are aimed at improving energy efficiency. For example, over 437K has been invested to replace the majority of lighting at CAH to LED, 79K was spent to install LED lighting within the multi-story car park at the LGI and in the under-crofts at SJUH and £212K has been spent on LED lighting schemes within areas of the LGI and SJUH. LED lights are significantly more efficient requiring less electricity and creating fewer carbon emissions. Furthermore, LEDs last considerably longer than alternatives and provide a return on investment through avoided costs.

The Trust has also worked to optimise its Building Management System (BMS) which controls heating and lighting across the estate. One key intervention has been to introduce temperature set points for heating in different areas, such as clinical and non-clinical areas. As discussed above, significant levels of capital have been invested to upgrade the CHPs at SJUH and LGI in order to deliver improved efficiency and reduce CO<sub>2</sub>e emissions. The Trust has also addressed energy issues with IT equipment. A key intervention has been the installation of CentroPower Studio, which automatically shuts down PCs which have been left on after a defined period of time. This intervention alone saves c.420 tonnes of CO<sub>2</sub>e/annum and c.£150,000.

The Trust has trialled the installation of occupancy sensors on lighting to prevent lights from being left on. The sensors are currently installed in priority installation areas identified at the Trust, with the proportion of the estate covered by sensors increasing each year.

The Trust has done extensive work to reduce our carbon footprint generated through the prescription of asthma inhalers. Inhalers generate CO<sub>2</sub>e emissions due to the propellant gases utilised to deliver medicine to the user. However, different types of inhaler have significantly different CO<sub>2</sub>e footprints. The two main types of inhaler are metered dose inhalers (MDIs) and dry powder inhalers (DPIs). Different brands of each inhaler generate different quantities of CO<sub>2</sub>e emissions, however, MDIs have a significantly higher environmental impact than DPIs on the whole. Delivering a 4% carbon reduction by shifting to lower carbon inhalers is a stated aim in the NHS Long Term Plan (see Section 4.1 “Sustainability Drivers”) and the Trust has begun work to meet this target. Clinical priorities always outweigh environmental considerations and therefore, the medical needs of the patient and clinical judgement of the clinician will always be the primary decision making criteria in the choice between MDIs and DPIs. However, prescription guidance developed by the Trust’s pharmacy department suggests to clinicians that where appropriate, DPIs should be the first choice, where clinically appropriate. This work to promote the use of DPIs over MDIs is ongoing and work to understand the impacts and changes in CO<sub>2</sub>e emissions from changes in use of MDIs and DPIs will form an intervention in this Green Plan’s Sustainable Action Plan (Section 6).

### 3.10.2 Air Pollution

The Trust has worked to reduce the local air quality impacts associated with travel and transport to and from NHS sites. Electrical charging infrastructure has been improved at the Trust with sixteen electric vehicle spaces provided in Trust carparks at SJUH.

The Trust has worked with the lease provider of the Trust shuttle buses to ensure that they are all now low or ultra low emission vehicles and is working to make 20% of fleet vehicles E.V. In addition to reducing air pollution, the adoption of newer, cleaner vehicles will also help the Trust to reduce carbon emissions

associated with our fleet. The Trust have adopted the FTA Van Excellence Scheme - Logistics Carbon Reduction Scheme and received accreditation.

LCC is in the process of implementing a Clean Air Zone (CAZ) in Leeds in order to address the issue of air pollution. A clause within the contract stipulates that all vehicles leased from LCC must be compliant with the CAZ requirements. This ensures that the Trust’s fleet will be low or ultra-low emissions. A proportion of these vehicles will be electric vehicles (EVs) with a target of at least 20% EVs remaining. In addition to reducing air pollution, the adoption of newer, cleaner vehicles will also help the Trust to reduce carbon emissions associated with our fleet. The Trust have adopted the FTA Van Excellence Scheme - Logistics Carbon Reduction Scheme and received accreditation.

The travel guidance given by the Trust has been regularly reviewed and updated, to ensure that the most sustainable modes of transport are communicated to those travelling to sites. The low carbon travel campaign was extended from staff to patient travel and the Trust have made better provision of the staff shuttle bus service between LGI and SJUH and between SJUH and the bus station, saving approximately 272 tonnes of carbon in 2019/20.

The Trust has organised events to participate in the national “Clean Air Day” to raise awareness about the issues of air pollution and the measures that staff and patients can take to support the Trust’s work to reduce air pollution.

To help improve both biodiversity and human wellbeing, the Trust has worked to promote, establish and safeguard green space within our estate, regardless of their location. This has been monitored through periodic assessments of sites using aerial photography analysis. These green spaces include maintaining grass area, protecting trees and installing green roofs on new builds within the estate.

### 3.10.3 Waste

Since the publication of the last SDMP, the Trust has made significant changes in the management of waste, resulting in waste being managed at the highest level of the waste hierarchy. The Trust has identified and progressed the opportunities for reuse within the organisation, including becoming a member of Warp-It; a public sector reuse initiative that facilitates trading of surplus assets within and between organisations.

The recycling provision for dry recyclables (paper, card, glass, plastics and metals) was increased in the Trust, where permitted by healthcare guidance. This resulted in an increase of dry recycling and a fall in residual waste tonnages. By providing additional recycling bins and ensuring the Waste Carrier could collect and correctly recycle the specified material the Trust has managed to avoid a substantial amount of waste entering landfill, including the 0.54 tonnes of milk packaging from the Trust now recycled per year. To reduce the dependency on waste receptacles, the Trust has begun to remove bins from individual offices, starting with Trust HQ. This encourages recycling rates as staff are required to use centrally located recycling stations as opposed to personal bins. This has Health and Wellbeing advantages, through encouraging more frequent movement away from desks. This also benefits the facilities team, via a reduction in number of bins that they have to service.

To limit the waste being sent to landfill the Trust had to collaborate with key partners to ensure that the waste was being managed in the best way possible. This included working with waste contractors to explore how the Trust could eliminate all waste sent to landfill. The Trust extended their waste reduction strategy externally and formulated packaging reduction targets and agreements with suppliers in an effort to reduce the single use packaging entering the Trust.

The improvements made to waste management at the Trust have required both changes to the waste provisions at the sites and behaviour change. Training has been

important in promoting behaviour change. B Braun, a key medical equipment supplier, ran a publicity and training programme beginning in 2017/2018 which established the baseline position and enabled improvement targets to be established for the use of multi-use devices and the reduction of single use items. By reviewing the provision of infectious and non-infectious clinical waste and raising awareness of the correct disposal routes amongst staff the infectious arisings sent for high temperature incineration have also been reduced.

## 3.11 Strategic Sustainability Management Group

Since the adoption of the SDMP several further actions have been implemented by the Trust's SSMG. These key initiatives, in addition to the SDMP actions, have made some large carbon savings and improved air quality and waste management at the Trust.

### 3.11.1 Carbon Reduction

LED lighting has been increased across St James' University Hospital, this has focused on replacing street lighting which required an initial investment of £60,000, this made a carbon reduction of 50 tonnes in 2019/2020 and will save approximately £13,780 annually.

The Combined Heat and Power units (CHP) at SJUH have undergone refurbishment, this will introduce a 1,500 tonne carbon saving each year, and allows the Trust to continue to generate a proportion of its electricity on site.

Resource within the Estates and Facilities department has been allocated for the project management of the Energy Accelerator programme. Designed to replace lighting around SJUH, this includes managing the roll out of motion detectors and other lighting replacement schemes. Boiler efficiency has been increased by using fewer boilers in the summer, and options to gain an overall reduction in electricity and gas usage through behaviour change have been explored. The Trust has worked with procurement to improve the consideration of energy efficiency

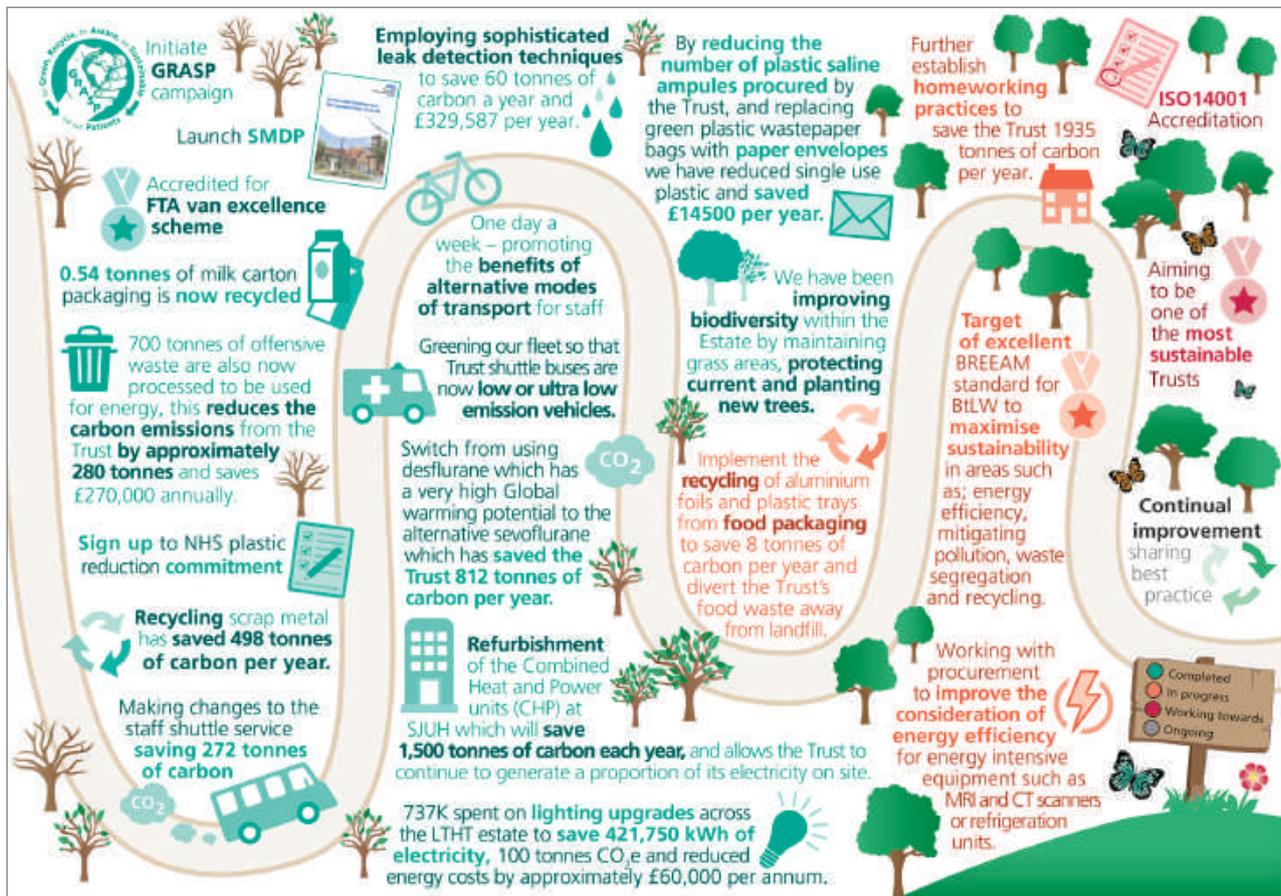
for energy intensive equipment such as MRI and CT scanners or refrigeration units, to ensure that long term sustainability is factored into procurement decisions.

One key area where the Trust has cut carbon emissions is in the reduction of waste anaesthetic gases. The Trust reduced the amount of Desflurane (a potent greenhouse

gas) used in theatres in favour of Sevoflurane which has a much lower carbon profile. This has reduced emissions by 812 tonnes per year.

The Trust has also used leak detection services to save both carbon and water. This makes a relatively small carbon saving of 60 tonnes per year, however, provides a large annual cost saving of £329,587.

### 3.11.2 Completing our journey



### 3.11.3 Air Pollution

The Trust estimates that 19,000 tonnes CO<sub>2</sub>e are produced each year from staff commuting, contributing to climate change and air pollution. The Trust has reviewed its policy on car sharing and is exploring ways to incentivise sharing cars to cut the journeys taken to and from Trust sites. Home working has also been reviewed to reduce staff commuting. It is estimated that 10% of staff would be able to work from home, which would save up to 1.95% of annual carbon emissions at the Trust – equivalent to 1,935 tonnes annually. The recent measures taken by the Trust to adapt to social distancing requirements resulting from Covid 19 which include the introduction of Skype for Business and Microsoft Teams are likely to assist with the behaviour change necessary to achieve this homeworking target.

### 3.11.4 Waste

The Trust has undertaken a comprehensive review of our waste management system and processes, this highlighted areas where waste management could be improved to make waste and cost savings. This has resulted in several measures for reducing waste production and elevating the waste produced in the waste management hierarchy.

Waste has been reduced by limiting the number of plastic saline ampoules procured by the Trust and reducing single use plastic by replacing green plastic confidential wastepaper bags with paper envelopes or hessian sacks, implementing this action has also saved the Trust £14,500 per year. By using technology better, the Trust has also managed to reduce the use of the postal service, which has reduced waste and greatly improved efficiency within the Trust.

To ensure waste is being managed at the highest level within the waste hierarchy the Trust has implemented energy from waste initiatives. The Trust has begun separating out food waste from other waste streams. This Trust are exploring options to send segregated food waste to renewable energy plants, such as anaerobic digestion. This improves our recycling rates and helps support the generation of low

carbon energy. Additionally, the recycling of aluminium foils and plastic trays from food packaging, from 2020 onwards will save 8 tonnes of carbon per year and divert the Trust's food waste away from landfill.

700 tonnes of offensive waste are also now processed to be used for energy, this reduces the carbon emissions from the Trust by approximately 280 tonnes and saves £270,000 annually.

The Trust has made better provisions for recycling, now segregating scrap metals onsite for recycling, saving 498 tonnes of carbon per year. The Trust have also provided additional bins for better waste segregation, including introducing reusable sharps receptacles, in 2020/21 this measure will make a carbon reduction of 450 tonnes annually and save £50,000 annually.

### 3.11.5 Sustainable Development Assessment Tool

The Sustainable Development Assessment Tool (SDAT) is provided by the NHS Sustainable Development Unit (SDU) and allows Trusts to appraise their level of sustainability in ten different areas. The SDAT is aligned to the United Nations (UN) Sustainable Development Goals (SDGs). The Trust utilises the SDAT tool to continually monitor our progress against a range of sustainability criteria and to help guide future interventions.

## 4.0 Objectives and targets

Building upon the success the Trust has already achieved, we now set forth the new drivers, objectives, targets and actions. The Trust's overall vision is to become one of the Greenest Trust's in the UK and ensuring we follow the most up-to date and pertinent guidance is a key means by which to achieve our vision. An endorsement of the importance of setting and meeting these targets has been included from the Director of Estates and Facilities.

*“Sustainability is a key priority for the Trust and as an anchor institution we recognise that by setting ourselves ambitious targets and making fundamental and innovative changes to the way in which we operate we can drive forward environmental, economic and social performance. We have developed this Green Plan to embed sustainability across every area of the organisation and to provide a framework against which we will continue to monitor and challenge ourselves.”*



**Craig Richardson**  
Director of Estates and Facilities  
(Board Sustainability Champion)

## 4.1 Sustainability Drivers

UK legislation and health sector specific policy drives sustainable healthcare within the NHS. This section of the document outlines the Trust's commitment to helping achieve national targets.

There are three key NHS specific documents that establish sustainability drivers for the Trust;

- NHS Long Term Plan
- NHS Standard Service Contract 2020/21
- NHS Operational Planning and Contracting Guidance

The NHS Long Term Plan sets out how the NHS will transform and improve over the next 10 years and includes considerations pertaining to sustainability. The NHS Standard Service Contract contains a series of targets and objectives pertaining to sustainability and is an integral requirement for NHS Trusts. In order to achieve the environmental targets, set by the government and to sustain the NHS in the future the NHS Operational Planning and Contracting Guidance provides guidance on the actions required in 2020/21 including operational requirements, workforce transformation requirements, financial requirements, and the processes and timescales associated with these requirements.

The following targets and objectives are explicitly stated in the above documents:

- Deliver a 4% reduction (in carbon emissions) by shifting to lower carbon inhalers;
- Deliver a 2% reduction (in carbon emissions) by transforming anaesthetic practices;
- Reduce the NHS' carbon footprint by one third of the 2007 baseline by 2020 through improving energy efficiency;
- Purchase 100% renewable electricity at all NHS organisations by April 2021; and,
- Adopt the single use plastics pledge.

In January 2020, the CEO of the NHS, Sir Simon Stevens, launched the For a Greener

NHS campaign which will help to address the NHS' impact on climate change, air pollution and waste. Success in this campaign will require action from NHS staff, hospitals and partners across the UK.

The Climate Change Act 2008 established a legislative requirement for the UK to be carbon neutral by 2050. This is the primary legislative driver for carbon reduction in the UK and established a clear mandate for organisations to manage and reduce their carbon emissions. This provides a clear framework to assist the UK in reducing greenhouse gas emissions and adapting to climate change. With increasing evidence that the UK needed to make greater reductions in its carbon emissions, the legally binding carbon reduction targets required by the Climate Change Act were increased in 2019.

## 4.2 The Targets we will adopt

### 4.2.1 Carbon Emissions

In line with all pertinent legislation, contracts and guidance, the Trust will adopt the following carbon reduction targets. These carbon reductions targets are to be measured against our baseline year of 2013-14, in which our carbon footprint was 107,501 tCO<sub>2</sub>e.

The targets are now:

- A reduction of 28% by 2020;
- A reduction of 44% by 2025;
- A reduction of 58% by 2030; and;
- An overall reduction of 100% by 2050

Table 6 presents the required level of emissions (in tCO<sub>2</sub>e) at each milestone year for the Trust

to adhere to the interim and overall targets. It should be noted that the targets for the years 2020, 2025 and 2030 are not legally binding. These targets have been put in place to ensure that the Trust follows the correct trajectory in order to meet the overall carbon net-zero target in 2050. Performance against the targets will be monitored and managed through the Trust Strategic Sustainability Management Group (SSMG) and will be reported to F&P every six months.

Figure 8 presents the necessary trajectory that the Trust's CO<sub>2</sub>e emissions need to follow if we are to remain on course to meet the 2050 target of net-zero emissions. Figure 8 demonstrates that the Trust is on the correct trajectory in terms of emission reduction, although a couple years behind the necessary trend line.

Figure 8 presents the trajectory that the Trust's carbon emissions must follow if we are to meet all the interim targets and move towards the net-zero 2050 target. Section 5 "A Pathway to Net Zero" presents detailed analysis about our likely journey towards the 2050 target.

The pathway to achieving net zero in the NHS has been set out by the Climate Change Act. The NHS has set incremental targets, as shown in Figure 8 in line with the Climate Change Act carbon budgets.

The Trust have made a significant reduction in their fossil fuel emissions since the publication of the 2017 SDMP, achieving a 16% reduction of CO<sub>2</sub>e emissions from the baseline. The Trust is not however on track to achieve the 2020 target which requires a 28% carbon reduction from the 2013 baseline.

Table 6- Target emissions in both percentage terms and tCO<sub>2</sub>e

Metric	2013 (Baseline)	2020	2025	2030	2050
Target Emissions (%)	100	72	66	42	0
Target Emissions (tCO <sub>2</sub> e)	107,501	77,400	70,950	55,900	0

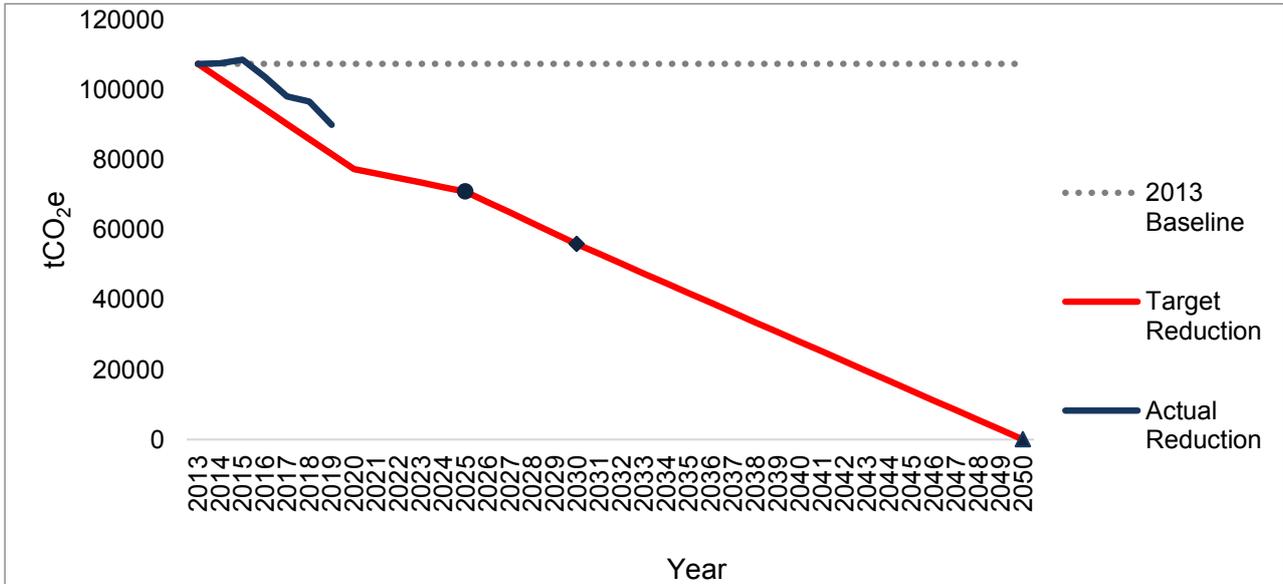


Figure 8 - The Trust's long term CO<sub>2</sub>e emission targets.

If the Trust is to meet the 2025 target of a 44% reduction then it will be required to reduce annual emissions from 90,041 tCO<sub>2</sub>e in 2020 to 70,950 tCO<sub>2</sub>e in 2025. This would require an annual emissions reduction by approximately 3,818 tCO<sub>2</sub>e each year between 2020 and 2025.

Assuming that the 2025 target is met, then to meet the 2030 target, the Trust will need to reduce emissions by approximately 3,010 tonnes each year, for 5 years in order to reach an emission level of 55,900 tCO<sub>2</sub>e per annum.

#### 4.2.2 Air Pollution

Air pollution is considered to be the largest environmental threat to health in the UK. Poor air quality is predominantly a result of the emission of particulate matter (PM), nitrous oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>). These pollutants have significant impact upon human health and can cause and exacerbate respiratory, cardiovascular and neurological illness. Furthermore, Leeds is frequently ranked as Top 5 city in the UK for worst air quality. Therefore, the issue of air pollution is of particular importance for the Trust. Through our activities and the emission of air pollution, the Trust are contributing to this health issues and potentially causing patients to become ill and

to eventually require care in our hospitals. Therefore, by reducing our contribution to air pollution, we can not only have a significant positive environmental impact, we can improve health outcomes for the people of Leeds.

The issue of air pollution places significant pressure on the NHS, in 2017 the health and social care cost of air pollution in England was £42.8 million, Public Health England predicts that this cost could reach £5.3 billion by 2035 unless action on air pollution is taken

In order to reduce air pollution created by the Trust, we will adopt the following targets:

- Cut business mileages and fleet air pollutant emissions by 20% by 2023/24;
- Ensure at least 90% of the NHS fleet are low-emission vehicles by 2028;
- Ensure 25% of the NHS fleet are Ultra Low Emissions vehicles by 2028; and,
- End business travel reimbursement for domestic flights within England, Wales and Scotland.

As outlined in the Operational Planning and Contracting Guidance from the 1st of April 2020 all fleet vehicles purchased or leased

by NHS organisations must support the transition to low and ultra-low emissions, in line with the long-term targets. This will ensure that any car leasing schemes promote the use of low emission vehicles and restrict the availability of high emissions vehicles. Business travel reimbursement for domestic flights within England Wales and Scotland will also be scrapped.

The Trust has completed the Sustainable Development Unit's Health Outcome of Travel Tool (HOTT) in 2017 and 2018 to better understand our impact on the environment through travel associated with the Trust. The Trust has utilised this data to target areas for improving travel and associate CO<sub>2</sub>e emissions. The Trust will commit to using the HOTT tool over the course of this Green Plan.

### 4.2.3 Plastics and Waste

Waste is a significant cost to the NHS, with clinical waste requiring expensive methods of disposal. Disposing of waste cost the Trust approximately £3.1million in 2018-19. To reduce this cost, reduce the strain on natural resources and improve the environment the NHS is reducing the amount of single use plastics used in its organisations and increasing the amount of waste that avoids landfill.

As part of the Trust's commitment to sustainability, we will adopt the NHS Single-Use Plastics Reduction Campaign Pledge. This pledge requires us to:

- By April 2020, no longer purchase single-use plastic stirrers and straws, except where a person has a specific need, in line with the government consultation
- By April 2021, no longer purchase single-use plastic cutlery, plates or single-use cups made of expanded polystyrene or oxo-degradable plastics
- By April 2021, go beyond these commitments in reducing single-use plastic food containers and other plastic cups for beverage – including covers and lids

In addition to the above pledge, the Trust will work to reduce single use plastic items in other areas, including; gloves, gowns and hygiene products.

Aside from single-use plastic reduction, the Trust recognises the need to improve recycling across our estate. Recycling is one of the most common requests that the sustainability team are asked about and we recognise the desire amongst our colleagues to see more recycling. Therefore, the Trust will also adopt the following objectives:

- the removal of all domestic waste (black bag) bins from offices, meeting rooms, communal areas and other non-clinical staff locations
- provide recycling stations in communal areas to replace the removed black bins
- continue to work with our waste contractors to ensure that waste is managed and disposed of at the highest level of the waste hierarchy

## 5.0 A pathway to carbon net zero

The Trust has already begun its journey towards carbon net-zero through the implementation of the first tranche of sustainability interventions from our previous SDMP. We have been successful in reducing our carbon emissions, implementing changes to reduce air pollution and improving the way in which we segregate and manage our waste.

However, we must remain aware that our target to become carbon net-zero by 2050 is a monumental task. 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 the people of Leeds will be hugely challenging. If we are to meet our objectives and targets and move to a carbon-neutral position then we must adopt an extensive action plan to achieve this aim.

Our Sustainable Action Plan provides a comprehensive scope of interventions designed to improve the Trust's level of sustainability, in our three key areas: carbon emissions reduction, air pollution reduction and waste reduction. The Sustainable Action Plan concerns actions that we, as a Trust, can implement within our own organisation in order to meet our targets and objectives. Our Sustainable Action Plan is presented, in detail, in Section 6 of this Green Plan.

It is important to consider that the Trust is by no means alone in our journey to Carbon Net-Zero. Indeed, the legal requirement to become carbon neutral is one shared by the entire UK, under the Climate Change Act 2008. As such, there are actions that will be taken which are outside the Trust's control, which will have significant impacts upon our carbon emissions and will greatly influence whether or not we are able to become carbon neutral. Accordingly, this section explores potential changes on a local and national level, outside of the Trust's control, that will have significant impacts upon our environmental impact.

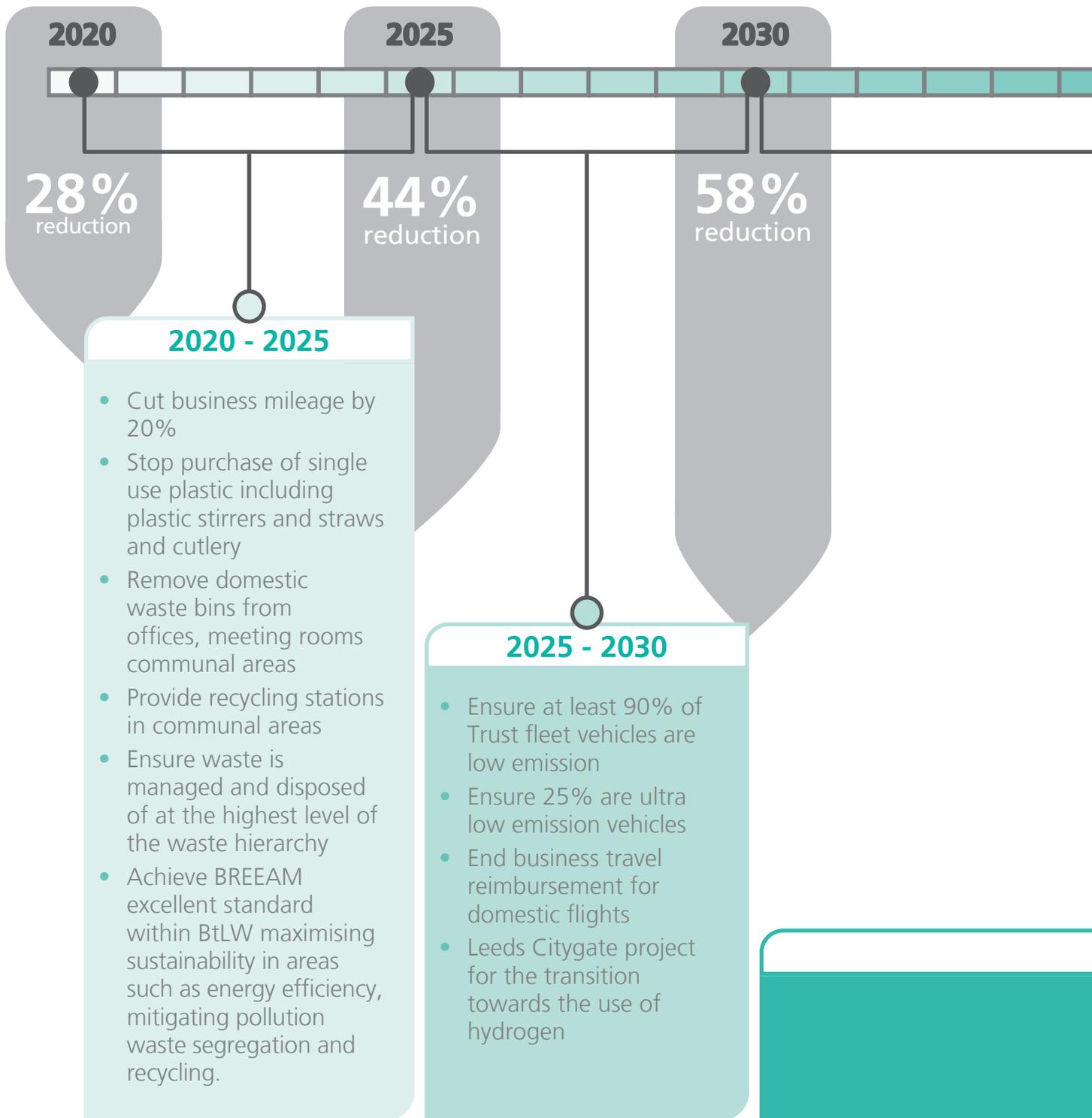
### 5.1 The transition from natural gas to hydrogen

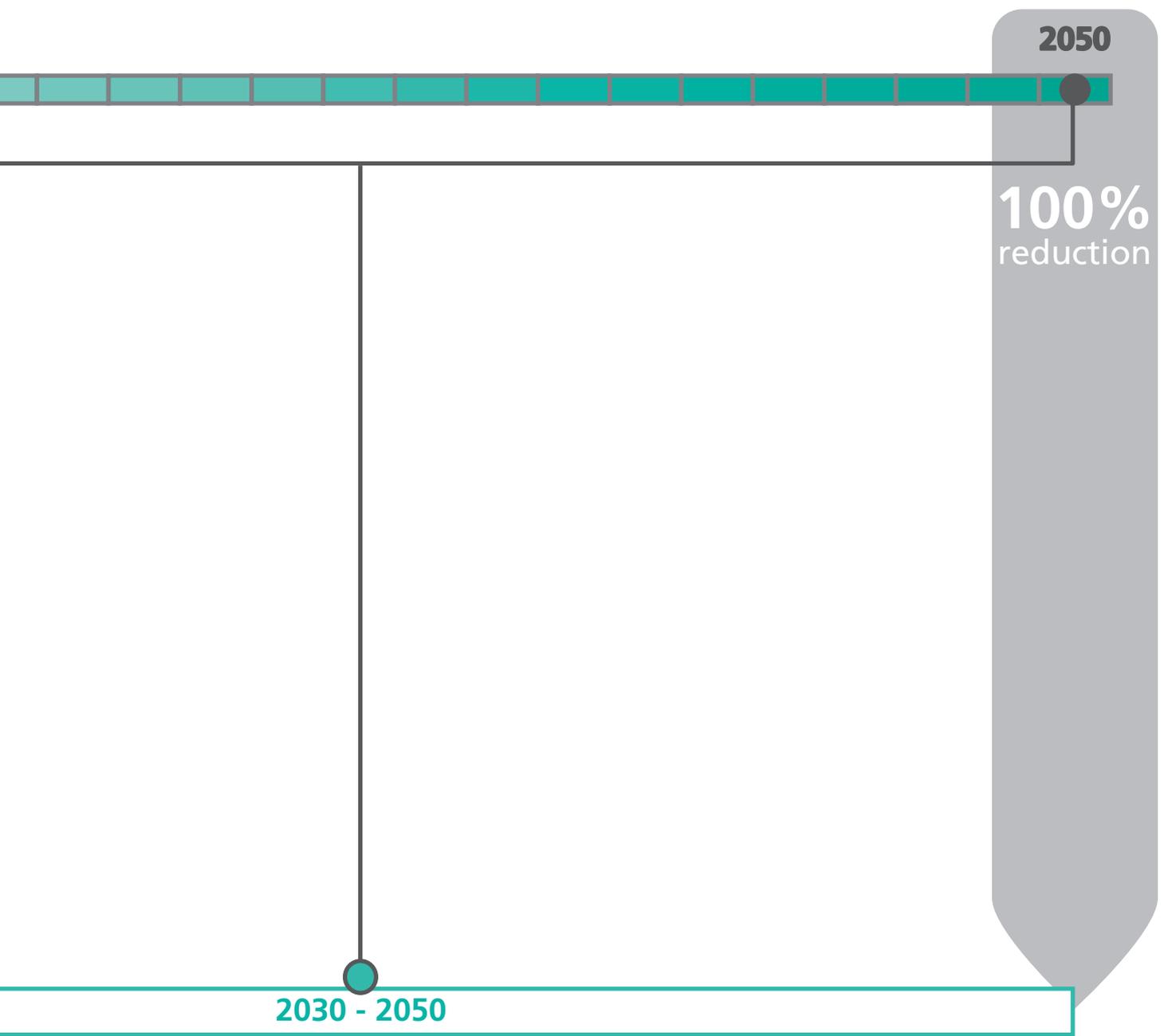
Work is underway within the city of Leeds to replace natural gas with hydrogen. The H21 City Gate Project seeks to convert the gas grid to hydrogen. Estimates suggest that by converting the gas grid to hydrogen, 73% of carbon emissions could be reduced in the UK. Leeds will be one of the first cities in the UK to convert to a fully hydrogen gas network, with works scheduled to take place between 2026 and 2029. The percentage of the grid converted to hydrogen will be increased slowly, this is so not to overload the suppliers and to provide adequate time for training. The grid and gas combustion appliances, including the CHPs, domestic appliances, may require conversion to ensure that they are suitable for hydrogen use. The conversion process will be carried out incrementally to minimise disruption to the gas network, with works in Leeds taking place over three years, between the months of April and September, when gas use is at its lowest.

Hydrogen produces zero carbon at the point of use and has been proven to be safe when used instead of natural gas for heating. Carbon emissions are however generated when hydrogen is produced, through a process known as Steam Methane Reduction (SMR). SMR is a process by which methane (CH<sub>4</sub>) is separated into carbon monoxide (CO) and hydrogen (H<sub>2</sub>). Therefore, this process unavoidably creates carbon monoxide and therefore, carbon emissions. However, a key part of the H21 City Gate Project is to install carbon-capture storage (CCS) to capture carbon generated during the SMR process.

If this project to convert Leeds from natural gas to hydrogen proceeds as is planned, then by 2029, the Trust will potentially cease using gas and begin using hydrogen. This is a vital consideration in the Trust's pathway towards net zero. Import of gas from the grid in our baseline year created 52% of total emissions. Therefore, if gas is replaced by the ultra-low emission alternative of hydrogen, our carbon emissions will be significantly reduced.

# LTHT Net Zero Key Action timeline





- Switch to 100% Electric vehicles
- Continue to innovate through collaboration with other Anchor institutions
- Continue to review and update actions inline with technical innovations

Figure 10 presents modelled carbon emission projections from 2020/21 to 2049/50 under the proposed scenario in which gas is phased out and hydrogen is adopted as a fuel source. By fully converting to hydrogen, the Trust could reduce our carbon emissions from gas import by approximately 88% in just three years between 2026 and 2029. After the transition to hydrogen is completed, total emissions from use of hydrogen are projected to emit approximately 7,000 tCO<sub>2</sub>e/annum. This represents a potential reduction in CO<sub>2</sub>e emissions from current gas use of 88%.

In terms of total emissions, converting gas import to hydrogen import would provide a significant benefit to meeting the 2050 carbon net zero target. Figure 10 demonstrates that if the hydrogen transition occurs as is currently planned (between 2026 – 2029) then the Trust’s CO<sub>2</sub>e emissions will decrease to 54,221 tCO<sub>2</sub>e per annum by 2030. This would put the Trust on course to hit the 2030 CO<sub>2</sub>e emission reduction target of 55,900 tCO<sub>2</sub>e.

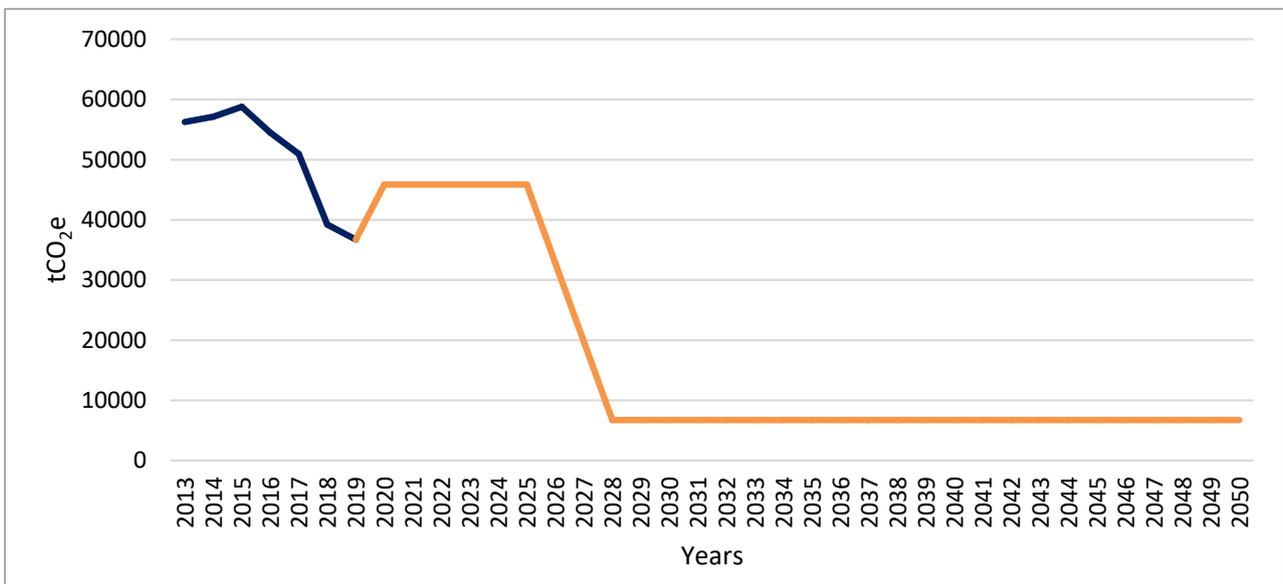


Figure 9 - The projected emissions from gas and hydrogen use at the Trust, due to the citywide transition from natural gas to hydrogen

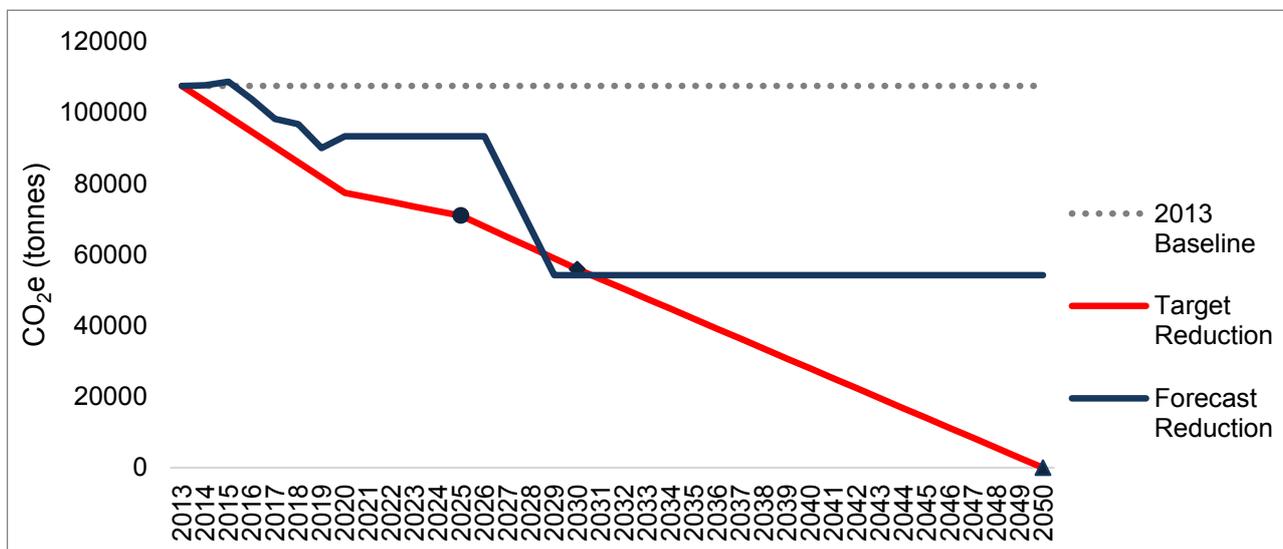


Figure 10- forecast emissions under hydrogen transition scenario against 2050 target

## 5.2 Adopting Electric Vehicles

In February 2020 the Government announced that the sale of all new petrol, diesel and hybrid vehicles would be banned from 2035. These vehicles can be classified as internal combustion engine vehicles (ICEVs). The ban on new ICEVs will precipitate the adoption of electric vehicles (EVs) which, are zero-carbon at the point of use. Not only do EVs have lower carbon emissions than ICEVs they also produce significantly less air pollution and waste. Therefore, it can be seen, that the adoption of EVs will help the Trust to meet its three areas of focus, carbon emission reduction, air pollution reduction and waste reduction.

In terms of carbon emissions, the use of ICEVs creates a significant proportion of the Trust's carbon footprint. In our baseline year business travel, patient transport, visitor travel and commuting created 27,147 tCO<sub>2</sub>e. This total represents 25% of total emissions. Therefore, a change of national policy to replace ICEVs with EVs will help the Trust to move towards carbon net-zero. Figure 11 models a potential future scenario where, by 2050, all vehicles are EVs, thus reducing carbon emissions by 100%. The gradual decline in emissions has

been modelled, since the purchase and use of EVs is already on the increase prior to the government ban in 2035. Furthermore, as EV charging networks increase, EVs themselves become cheaper and government taxes of fossil fuels increase, the adoption of EVs is likely to increase at a faster rate prior to 2035.

The transition to EVs is likely to accelerate due to the introduction of a Clean Air Zone (CAZ) within Leeds in mid-2020. All of the main Trust sites, excluding Wharfedale, will be within the new Leeds Clean Air Zone. This zoning is designed to encourage the transition to low and ultra-low emission vehicles. The CAZ will charge non-compliant vehicles to charge within the zone, thus encouraging a transition to EVs.

The adoption of EVs will also help the Trust to address the key issue of air pollution. The use of ICEVs is a principal cause of air pollution through the release of tail-pipe emissions (particulate matter, NO<sub>x</sub>, SO<sub>2</sub>). EVs do not create tail-pipe emissions and therefore, provide a significant benefit for the reduction in air pollution within Leeds. Reducing air pollution can help to contribute towards improved health outcomes for our patients, thus, in the long term, potentially reducing admissions to our hospitals.

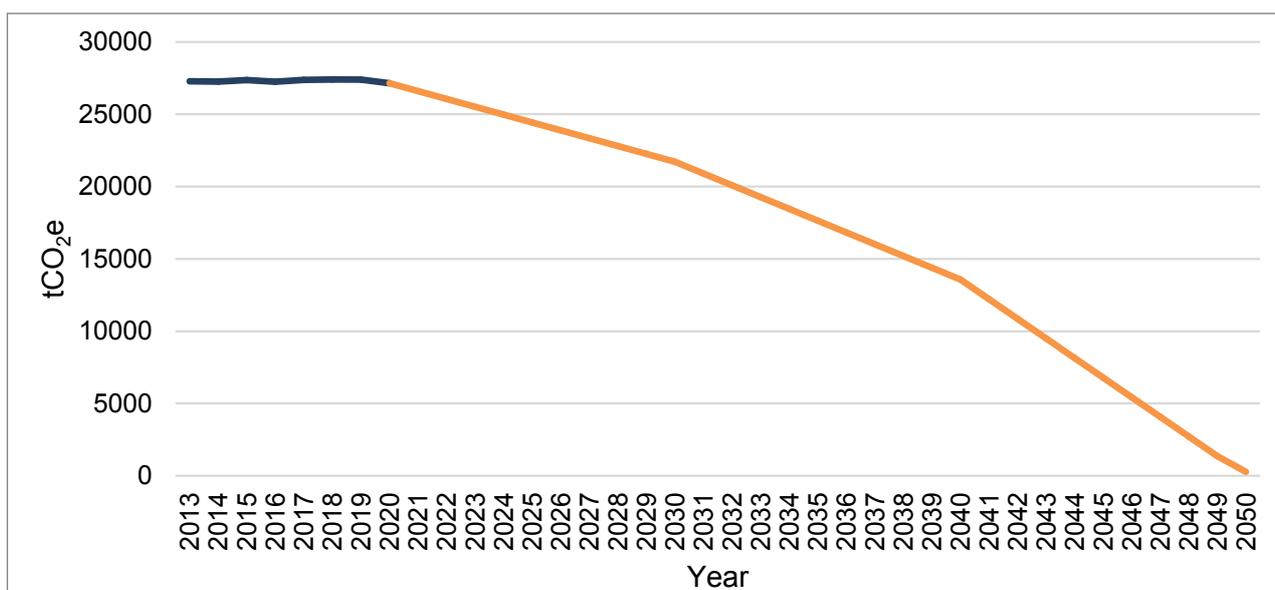


Figure 11 - The projected emissions for travel at the Trust, due to the nationwide ban on petrol, diesel and hybrid vehicle sales in 2035

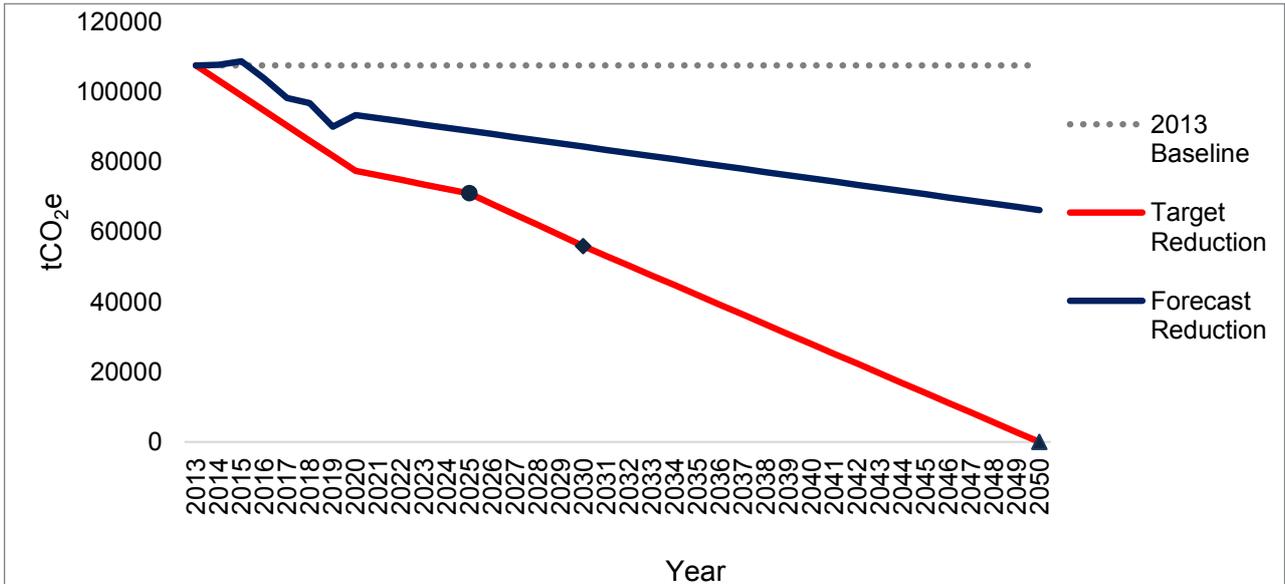


Figure 12- forecast emissions under electric vehicle transition scenario against 2050 target

As demonstrated by Figure 12, the transition to EVs would reduce overall CO<sub>2</sub>e emissions by 27,147 tonnes or 25%. This is likely to be a gradual reduction over the next three decades as ICEVs are gradually phased out of the market. Figure 12 also shows clearly, that relying solely on transition to EVs will not enable the Trust to achieve its emission reduction targets.

### 5.3 The impact on our carbon footprint

If successful, the conversion of the gas grid to hydrogen and the widespread adoption of electric vehicles combined could reduce the Trust's emissions to approximately 27,000 tCO<sub>2</sub>e by 2050. This is reliant on both schemes being successfully implemented, which is dependent on several external factors. As seen in Figure 13, these schemes will have a long-term effect on the carbon emissions but will not make immediate reductions, the most significant reductions will be achieved between 2026 and 2030.

These schemes will, alongside other sustainability initiatives set out in this plan, help move the Trust towards a net-zero position in 2050. However, these two interventions alone will not take the Trust all the way to net-zero.

There remains a gap of approximately 27,000 tCO<sub>2</sub>e that the Trust will need to reduce if we are to achieve the 2050 target. Figure 13 presents the expected scenario that the Trust will be in by 2050, taking into consideration all the work that has already been completed, the expected rise in gas emissions for the next few years and then the impact of the H21 City Gate Project and the adoption of EVs. It is of the utmost importance that the Trust closely monitor the development of these two schemes and maximise the potential opportunity presented by both schemes, if we are to achieve our ambition of becoming carbon net-zero by 2050.

A limitation of the previous SDMP was that there was no clear pathway to the 2050 target. This modelling (Figure 12) presents a robust route by which the Trust can achieve an 70% reduction in CO<sub>2</sub>e emissions by 2050. This substantive route towards an 70% reduction provides clarity on likely future emissions scenarios. Importantly, it highlights that there is a further 20% reduction on top of the hydrogen and EV transition if the Trust is to achieve its 2050 of becoming carbon net-zero.

It should be noted that this modelling does not include any potential savings delivered by implementation of the actions laid out within Green Plan action or the potential savings that

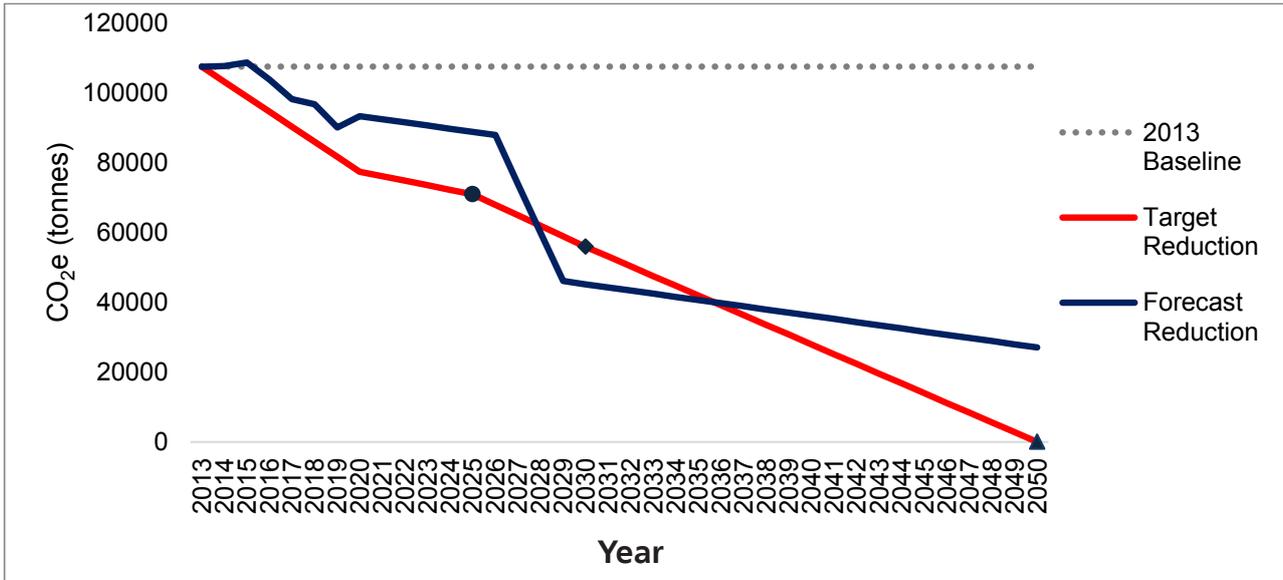


Figure 13- forecast emissions under hydrogen & electric vehicle transition scenario against 2050 target

will be delivered by the Building the Leeds Way Project. Nor does this modelling include the carbon reductions that will be achieved via the implementation of tranches of actions that will be set out in the myriad Sustainable Action Plans which will be implemented between 2020-21 and 2049-50. These Sustainable Action Plans will be refreshed every 2 years and will contain the most up to date and pressing interventions that the Trust can implement to reduce carbon emissions, air pollution and waste. Another key factor that will impact upon our environmental impact is the Building the Leeds Way Project.

### 5.4 Building the Leeds Way

Building the Leeds Way (BtLW) will involve a huge redevelopment of the current LGI site. All of the LGI, excluding the Jubilee Wing and any listed building, will be demolished and two brand new state-of-the-art hospitals will be constructed, the redeveloped LGI and the new Leeds Children’s Hospital (LCH). The current ambition is to have constructed the £650 million hospitals by the end of 2025. BtLW also includes the relocation of the pathology department to a brand unit facility at the SJUH site. Work under this Green Plan will be undertaken to ensure the BtLW is constructed and designed in line with the

mentioned sustainability considerations. This redevelopment of our major sites offers significant opportunities to improve our sustainability.

The current LGI dates back to the Victorian era and as such, is very inefficient to heat and power. The redevelopment of this site under BtLW is committed to ingraining sustainability into the design and operation of the new hospitals. Along with designing the best hospital to deliver the highest quality of care to the people of Leeds, BtLW will also be designed with sustainability consideration at its core. By designing a new hospital with the smallest impact on the environment, the BtLW development will secure the best health outcomes possible for the people of Leeds.

The design and construction of the new hospital will be done according to the BREEAM Standard. BREEAM can be used to ensure that new builds are designed to maximise sustainability in areas such as; energy efficiency, mitigating pollution, waste segregation and recycling. Therefore, adhering to the BREEAM standard will ensure that the new hospitals are built in manner which conforms to the three key aims of this Green Plan. The BtLW 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 BtLW hospitals.

A brief overview of sustainability considerations that will be designed and built into the BtLW development are presented below:

- development of a travel plan which will:
  - minimise single-occupancy car journeys to and from site;
  - promote to staff, patients and visitors the environmental and health implications of their travel choices;
  - increase percentage of journeys made by walking, cycling and public transport;
  - maximise sustainability transport choice; and,
  - promote the health benefits of walking and cycling.
- provide a minimum of 10% of the predicted energy needs from low carbon energy
- installation and use of absorption chillers to reduce CO<sub>2</sub>e emissions from heating, cooling and hot water use
- use of LED lighting, lights sensors and detection systems
- Utilising natural ventilation and light where possible (to reduce lighting and heating demands)
- Utilising modern construction methods to minimise emissions from construction
- a Site Waste Management Plan to encourage waste minimisation, recycling and reuse of materials
- targeting a 25% reduction in water consumption against baseline levels via use of efficient water fittings
- the use of Sustainable Urban Drainage Systems (SuDS)
- creation of green spaces at ground and roof level for patients, staff and visitors
- encourage biodiversity through the install of bat roost and bird nesting boxes and use of green walls

It is clear to see from the sustainability considerations being included in BtLW that the new hospital will be much greener than the current hospital and will help the Trust

to reduce overall CO<sub>2</sub>e emissions. Innovative construction projects to redevelop our Trust will help to address the outstanding 18,000 tCO<sub>2</sub>e emission that the Trust will need to eliminate if we are to become carbon net-zero by 2050.

## 5.5 The Trust as an Anchor Institution

The Trust will work collaboratively with our partners across Leeds to support and progress sustainability within the City. Within Leeds, the Trust is considered to be an “Anchor Institution” along with Leeds City Council, the University of Leeds and Leeds Beckett University. As Anchor Institutions we represent one of the most significant organisations with the City and our activities have a large impact on Leeds’ ambition to become a sustainable city. All the Anchor Institutions have very similar objectives in regard to sustainability, namely: carbon emissions reduction, improving air quality and reducing waste.

Therefore, the Anchor Institutions have developed a working partnership on sustainability to support each other in moving towards these aims. Examples of how we collaborate include the Leeds Climate Commission, the Top 10 Energy Users Group and the Leeds Anchors Plastic Reduction Group. Through these groups, we meet with our colleague organisations to discuss new initiatives, best practice, opportunities for collaboration and how to make Leeds more sustainable.

The Trust is the largest NHS organisation in Leeds and as such, we are a key partner in the Leeds Anchors Sustainability Taskforce (LAST). LAST has representatives from all of the key NHS organisations within Leeds, including Leeds CCG, Yorkshire Ambulance Services and the Leeds GP Confederation. LAST work collaboratively on issues of sustainability specific to the NHS. This group enables the various NHS organisations across the city to lobby senior management collectively for key issues facing all organisations. The LAST group was started after the Health and Wellbeing Board to Board featured a substantial section on sustainability during their December 2019 meeting.

## 6.0 Our sustainable action plan

In order to meet our carbon reduction, air pollution and waste targets, the Trust have developed a comprehensive Sustainable Action Plan, which is presented in this section. The adoption and implementation of this Sustainable Action Plan will help the Trust to meet its strategic objectives and overall ambition of becoming carbon neutral by 2050.

The Sustainable Action Plan is divided into 10 sections, which are:

- Corporate Approach
- Asset Management and Utilities
- Travel and Logistics
- Adaptation
- Capital Projects
- Greenspace and Biodiversity
- Sustainable Care Models
- Our People
- Sustainable Use of Resources
- Carbon and Greenhouse Gases

These sections have been taken from the Sustainable Development Assessment Tool (SDAT) which has been developed to align with the UN Sustainable Development Goals (SDGs). By adopting the format of the SDAT into our Sustainable Action Plan we can ensure that we consider all aspects of sustainability as established by the UN framework.

This Sustainable Action Plan commits the Trust to a range of actions over between 2020 and 2022 which will help move us forward on our pathway to net-zero. The Sustainability will monitor, implement and manage the delivery of this action plan, working with our colleagues across the Trust to implement the actions contained within the plan.

Due to its size, the Sustainable Action Plan is not presented in this document, however, it is a crucial aspect of the Green Plan and is available as a separate appendix. An overview of each of the key section is presented across the following pages.



Figure 14- UN Sustainable Development Goals

# LTHT Sustainable Action Plan



## Sustainable use of resources

**17 actions** to ensure the Trust adopts a more sustainable approach to managing resources, **reduces** the amount of **waste** that we generate, our **carbon emissions** and **air pollution**.

**Executive Sponsor:** Finance



## Travel and logistics

**11 actions** to improve the sustainability of travel associated with the Trust and to capitalise upon suitable technologies wherever practical to remove the necessity of staff and patient travel.

**Executive Sponsor:** HR

## Asset management and utilities

**6 actions** with a focus on reduction of the most emission intensive areas for reduction, **gas** and **electricity** consumption.

**Executive Sponsor:** E&F

## Our people

**6 actions** based around **informing** and **training** staff on Sustainability and their engagement for **contribution** to the organisational target.

**Executive Sponsor:** HR

## Capital projects

**6 actions** to minimise the **environmental impacts** of new capital projects, including the Building the Leeds Way project.

**Executive Sponsor:** Finance

Stakeholder responsibility and accountability to become one of the **greenest Trusts**



## Sustainable models of care

**12 actions** to improve the Sustainability of our care models, so we can continue to provide high quality care that does not create negative environmental, social or economic impacts.

**Executive Sponsor:** Chief Medical Officer



## Corporate approach

**21 actions** to engage with and increase awareness of sustainability amongst employees to further enhance and improve the corporate approach.

**Executive Sponsor:** HR



## Carbon and GHG's

The Trust has set out **10 actions** which will be implemented throughout the organisation to continue to deliver carbon reductions so we can meet our emissions targets.

**Executive Sponsor:** E&F

## Greenspace and biodiversity

**6 actions** to provide greenspace and protect biodiversity to benefit the local environment, by improving air quality and helping remove the carbon emitted, and to improve wellbeing.

**Executive Sponsor:** E&F

## Adaptation

**11 actions** to ensure that the Trust can adapt to the likely changes in demand and impacts on operational delivery caused by climate change.

**Executive Sponsor:** Chief Medical Officer

## 6.1 Corporate Approach

Senior level staff engagement with the Green Plan is crucial to ensure that the plan is delivered throughout the organisation. Top down awareness of sustainability at the Trust can ensure that the principles of sustainability become embedded within the Trusts policies, procedures and systems. Management can also keep the Trust accountable for reducing our emissions, air pollution, waste and delivering the wider aims of the Green Plan.

21 actions have been established to improve the corporate approach to sustainability at the Trust. The Trust will focus on improving colleague engagement at the Trust, all staff will be actively encouraged to contribute information on sustainability for the Trust's annual report. The Trust will provide engagement programmes which will highlight the importance of integrating social and environmental aspects at the Trust and will provide training to staff to support them in implementing this. Sustainable board leadership programmes will also be provided to improve leadership skills and integrate sustainable development into the running of the organisation.

Procurement at the Trust will be reviewed and improved, an accountable senior leader will be allocated to be responsible for the management of sustainable procurement and social value in the organisation. The Trust will work to identify potential social, environmental and economic opportunities in procurement and shall look to extend our evaluation process for procurement to include a range of social and environmental standards such as ethical labour standards. The Trust will work with the supply chain to ingrain sustainability into the procurement process and capture data so that the progress with the changes to procurement can be monitored.

Engagement with stakeholders such as patients, staff and the local community will be carried out at the Trust to help shape the sustainable development policy. Where possible, we will work to assist our key partners in the development of their

strategies and will use these opportunities to promote sustainable development. We will seek to implement schemes which maximise the support given to the community and add social value in the community.

## 6.2 Asset Management and Utilities

Gas and electric consumption are the largest source of emissions at the Trust so the continual improvement in utilities management is crucial to reducing our carbon footprint and achieving our emissions targets. 6 actions have been approved for this area which will each contribute to lowering the CO<sub>2</sub>e emissions at the Trust through the more efficient use of utilities.

The Trust shall continue to roll out energy saving initiatives as part of our campaign on energy and resource efficiency. This will include the replacement of fluorescent lights with low energy alternatives, which will be linked to our sub-metering system to track reductions. The Building Management System will be optimised and improved, including the upgrade, maintenance and replacement of individual components. Energy efficiency will also be factored into procurement decisions in order that all new products, services and buildings acquired are suitably efficient.

The Trust will utilise new technology and innovations to improve carbon performance, including the further use of sub-metering and telematics. The Trust will participate in the Modern Energy partnership programme. In addition, the Trust shall monitor the development of local and national energy networks to explore new connection opportunities, including the potential transition from gas to hydrogen fuel as part of the H21 City Gate project.

## 6.3 Travel and Logistics

11 actions have been established to improve the sustainability of travel associated with the Trust. The actions primarily focus on

reducing the environmental impact of staff, patients and supplier travel at the Trust, both by reducing the requirement for travel and by encouraging the use of greener modes of transport.

The Trust has outlined actions which will capitalise upon suitable technologies, where practicable, to remove the necessity of staff and patient travel. The use of virtual meeting technologies will allow staff to work remotely and will therefore reduce the requirement for staff to travel for work. Similar technology will also be used in the delivery of telemedicine services which will allow patients to access health services without having to travel. This will be coupled with the Trust's Travel plan and a low carbon travel campaign to ensure that when staff and patients are required to travel, they are aware of low carbon options available.

In line with national targets, the Trust has begun to improve its fleet to lease only low carbon and low polluting vehicles. This will ensure that Trust vehicles are compliant with the Leeds Clean Air Zone and will help to reduce the Trust's contribution to local air pollution. In addition to Trust owned vehicles, the Trust plans to review the use of high-carbon business travel and promote greener business travel.

The Trust shall also work with suppliers to assess their contribution to the Trust's environmental impact. Through additional monitoring the Trust will assess the environmental impact of our suppliers and engage with them to find appropriate solutions.

## 6.4 Adaptation

Climate change is considered one of the greatest public health threats of the 21st century, as a healthcare provider. The Trust recognise the importance of adaptation in order to mitigate the impact of the changing climate and to ensure that the Trust can continue to deliver a high quality of care during extreme weather events.

The 11 actions identified outline the measures required to ensure the Trust can adapt to the likely changes in demand and impacts on operational delivery caused by climate change. These measures will ensure that the Trust assess the risks posed by climate change, both internally and externally. Internal risks can include impact on service provision. External risks can include impact on our supply chains and risk to the local population.

The Trust will then work collaboratively with staff and other partner organisations to develop a climate change adaptation strategy, and update business contingency plans to include climate risks. The impacts of climate change and extreme weather events on the NHS and community will be monitored by the Trust to allow the adaptation strategy to be adapted accordingly to ensure that our strategy is effective and protects vulnerable people.

## 6.5 Capital Projects

A significant proportion of our environmental impacts are associated with our estate. Refurbishing and rebuilding parts of the estate provides the opportunity to implement new technology and more efficient design to help reduce our emissions, resource air pollution and reduce waste.

The Trust have identified 6 actions to be implemented in new capital projects, including the Building the Leeds Way project. A strategic estates review has been carried out and the sustainability agenda was considered extensively during this process. The findings of the review will enable and guide refurbishments to the Trust estate that will improve energy efficiency. The Trust will ensure that adequate technology is installed at the new LGI to facilitate modern working practices and allow the Trust to provide reliable telemedicine services.

Whole life costing and embodied carbon analysis will be applied to the design and construction of the new LGI, which will be built according to the BREEAM standard.

The long-term requirements of the building will be considered in the design process to make sure the new LGI is adaptable and can be constructed and operated in manner which produces the least possible amount of CO<sub>2</sub>e emissions.

To ensure that the new capital projects also meet the needs of their users, the Trust will engage with key stakeholders including staff, patients, visitors and the local community throughout the design process. To provide high quality, integrated care in the community the Trust will also consult with local health and social care organisations when designing new buildings. Following the completion of capital projects, the Trust will then review the performance of the building and share the key lessons learnt from the project and the areas where best practice has been demonstrated.

## 6.6 Greenspace and Biodiversity

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. The Trust understands the value of greenspace and have established 6 actions to protect and enhance the natural environment on our estate.

A greenspace and biodiversity strategy will be developed, and the relevant staff and the necessary resources will be allocated to successfully deliver the strategy. To protect and improve biodiversity the Trust will first 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. We will then 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.

Where possible, Building the Leeds Way will preserve and/or add new greenspaces as part of the design and construction. This may include the landscaping of repurposed areas, use of green roofs and green walls.

We will also improve of use of resources where possible to reduce our wider impact on biodiversity. Food contracts will be updated to improve sustainability credentials and meet government guidelines.

## 6.7 Sustainable Care Models

To improve the sustainability performance of our Trust it is important to improve the sustainability of our care models, so we can continue to provide high quality care that does not create negative environmental, social or economic impacts. 12 actions have been identified to help create a systems-based approach to healthcare at the Trust. To achieve a systems approach, the Trust will work with partner organisations such as Leeds CCG and the local primary care network (PCN) to develop an approach which can effectively manage resources, staff, patients, infrastructure and finances in the local healthcare system. The sustainable use of all resources will be incorporated into the development and commissioning of new care models.

The Trust will seek to provide training regarding sustainable care models, which will help to embed sustainability in the delivery of care at the Trust. From this information we will begin to use sustainability as an indicator of quality and will link this with other dimensions of quality measures including fairness and equality when designing, delivering and commissioning care models.

Staff will receive training around sustainable care models, which will help to embed sustainability in the delivery of care at the Trust. This is important for helping to drive behavioural change which can produce improvements in our environmental performance. The Trust will continue to encourage, where clinically appropriate, the use of Sevoflurane as the primary anaesthetic agent in favour of Desflurane and the use

of dry-powder inhalers (DPIs) in favour of metered dose inhalers (MDIs) to significantly reduce carbon emissions.

Importantly, the Trust will work to ensure that prevention of illness is embedded in all care models. The Trust will work with staff and external partners to attempt to improve the factors which contribute to poor health and cause illness to ensure the Trust is helping to improve.

## 6.8 Our People

To successfully achieve our targets and provide sustainable healthcare, staff engagement with the Green Plan is required at all levels of our organisation. We aim to educate our staff so that they can reduce their emissions, carbon footprint and waste at home as well at the Trust. It is also extremely important that we provide a positive working environment and try to protect and improve the wellbeing of our staff.

6 actions will be implemented, which will include staff of all levels at the Trust. The training currently provided at the Trust will be reviewed and updated to include information on sustainability, including how individuals can contribute to achieving our sustainability target. A training and awareness programme will be implemented, focusing on improving staff understanding of sustainability and helping to drive behavioural change. Sustainability will then be included as part of staff appraisals and integrated into organisational policy throughout the Trust.

The Trust aims to actively promote wellbeing and will do so by implementing a variety of initiatives. The Trust will provide support schemes to help staff where required, such as parents and carers, and will seek to become a living wage employer to minimise the risk of poverty to staff. The Trust will also promote healthy and sustainable choices to staff.

We will seek to work to improve social sustainability in the wider community by

working with suppliers who promote equality, diversity and wellbeing in their workforce. We shall also work collaboratively with local partners to improve the provision of local accessible employment opportunities at the Trust.

## 6.9 Sustainable Use of Resources

By adopting a more sustainable approach to managing resources the Trust has the opportunity to reduce the amount of waste we generate, our carbon emissions and air pollution. 17 actions have been established to help improve the sustainable use of resources at the Trust.

The Trust will take a pan-organisation approach to waste management and minimisation and will work with the supply chain to reduce the materials brought into the Trust such as excess packaging that will immediately become waste. Through engaging with stakeholders, we can help to improve the efficiency of resource management throughout the supply chain. We will continue to apply the principles of the waste management hierarchy to our resource management and incorporate a life cycle consideration into our procurement process to reduce the amount of waste produced, and process the waste we do produce through the most sustainable method. The Trust will adopt the NHS England Single-Use Plastics Pledge and work to significantly reduce single use items. Single use items and medicine waste will also be reduced in clinical areas by providing guidance to CSU's on the suitability of each approach for different types of equipment and clinical setting and the adoption of a formal single use policy. The health of the local population as well as treat patients.

The Trust will seek to reduce the environmental impact of food at the Trust. The Trust will review the foods provided at the Trust and look to revise the catering contracts to include sustainability criteria. The Trust will also look to substitute

foods in vending machines for healthier alternatives and try to encourage staff to make sustainable choices. Composting and anaerobic digestion will be explored as possible methods that the processing of food waste at the Trust could be made more sustainable.

## 6.10 Carbon and Greenhouse Gases

Reducing carbon emissions at the Trust requires a Trust-wide approach, as there are carbon emissions associated with every aspect of our organisation. The Trust has set out 10 actions which will be implemented throughout the organisation to continue to deliver carbon reductions so we can meet our emissions targets.

The Trust will explore the options for procuring or generating renewable energy. The Trust plan to undertake a cost benefit analysis on the potential procurement of renewable gas generated by anaerobic digestion as part of the Green Gas Certification Scheme, to lower the emissions

from gas our largest emission source. The Trust will also look at the potential on-site renewables opportunities and identify technology that could facilitate their implementation.

We intend to improve the accuracy of the Trust's carbon baseline through additional monitoring, to track our progress. The energy savings initiative already in place will then be consolidated into a Trust wide energy strategy. Clinical areas will be included in this strategy, monitoring will be used to highlight any carbon hotspots in specific care models which will allow the Trust to extend our Switch Off Policy into relevant clinical areas.

The carbon baseline will also be extended to include estimated carbon emissions from procurement. We will use these estimates to identify areas where we can implement actions to reduce the emissions. We will also work closely with our strategic suppliers to support them in reducing their carbon emissions from the products and services they provide to the Trust.



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