NHS
The Queen Elizabeth Hospital King's Lynn
NHS Foundation Trust

OUR GREEN PLAN

January 2022

EXCELLENCE STARTS HERE

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EXECUTIVE SUMMARY

We know that climate change is detrimental to the health of our local community, and that our use of resources continues to contribute towards warming the atmosphere. Globally, the healthcare sector, including our organisation, is the fifth-largest contributor to carbon emissions. In the UK, the NHS contributes up to 4% of national Green House Gas (GHG) emissions.

The NHS is now leading the way globally by aiming to become the first net-zero health service. Over the past 10 years the NHS has reduced emissions by around 30% based on 1990 levels and has set us all an ambitious target to achieve net-zero by 2040, with an 80% reduction by 2028-2032.

The Queen Elizabeth Hospital King's Lynn (QEH) has been committed to tackling the climate challenge through becoming one of the first hospitals in the UK to be powered by an on-site turbine. We recognise that there are two critical ways we must respond to the challenge of climate change:

- Take mitigating action to reduce our operational impact
  - i. through our directly controlled operational activity, and
  - ii. by influencing the activity of our suppliers
- Adapt our services and the way we deliver care to support our local community response to the worsening effects of climate change

This report sets our Green Plan: our promise to you - our patients, staff and local community - to build on our commitment to tackling climate change.

We will work with you, our staff from Executives to front line, our patient representatives and Governors and our community to develop and maintain this plan until we achieve our goal.

OUR GREEN PROMISE

To take **responsibility** for our carbon contribution and commit to meeting the NHS target to achieve net-zero by 2040 and reduce direct emissions by 80% by 2032.

INTRODUCTION

The climate emergency is a health emergency.

Climate change is the greatest global public health threat of our time. Climate change threatens the three core pillars of good health, physical, mental and social wellbeing, through its disruptions to physical, biological, and ecological systems. This will result in serious health effects such as death and illness due to frequent extreme weather events, increased food and water insecurity as well as incidences of infectious diseases, and mental health issues.

INTRODUCING OUR GREEN PLAN

This Green Plan outlines our commitment to reducing our carbon footprint as a Trust to help create a greener NHS. It provides a high-level breakdown of our organisational vision, sustainable strategy and planned actions. This is aligned to our New Hospital Programme. It is our ambition to have a new hospital, but our commitment to this plan remains if our funding request is not successful. We will deliver our Green Plan with our existing estate and infrastructure.

WHAT DOES IT MEAN TO US?

At QEH, we are committed to embedding sustainability into our core operational activity. We recognise our impact on the environment and the strong link between sustainability and public health, particularly for disadvantaged groups who are most vulnerable to the impacts of climate change, including worsening health and increased socioeconomic inequality.

As a healthcare provider, we have been grappling with the effects of an unprecedented health crisis that has challenged the resilience of our sector and necessitated changes to the ways we serve our community. Learnings from our response, including the adoption of digital healthcare solutions in response to COVID-19, shows that there is both capacity and capability to change the way we do things without compromising our quality of care. Through the actions outlined in this Green Plan, we will integrate sustainable practices into the heart of our provision of care (delivery model) to mitigate our climate impact at the local, national and global level, as we look to lead in the drive to build more climate-proof, low-carbon healthcare systems.

UN CLIMATE CHANGE CONFERENCE UK 2021

At COP26, 51 national healthcare systems, which account for 30% of healthcare's total global emissions, made climate commitments, with 14 countries setting net-zero targets.

2050

UK COMMITS TO NET-ZERO GREENHOUSE GAS EMISSIONS BY 2050.

THE NHS IS RESPONSIBLE FOR 4% OF THE UK'S CARBON EMISSIONS

4%

NHS Carbon Footprint:

Net-zero by 2040 for the emissions we control directly

NHS Carbon Footprint Plus:

Net-Zero by 2045 for the emissions we can influence

ABOUT US

Who are we?

First opened in 1980, The Queen Elizabeth Hospital King's Lynn (QEH) provides acute services to the populations of King's Lynn and West Norfolk, and to parts of Cambridgeshire, Lincolnshire, North Norfolk and Breckland. Authorised in 2011, the Trust is commissioned by clinical commissioning groups from its three bordering counties - Norfolk, Cambridgeshire and Lincolnshire. The Trust's lead commissioner is NHS Norfolk and Waveney Clinical Commissioning Group.

With 518 beds, 18 wards and our 4,000-plus Team QEH staff, we provide a comprehensive range of specialist, acute, obstetrics and community-based services to around 279,000 people. The Trust recently acquired the Sandringham Unit, a dedicated elective surgical facility. This allows the resumption of our elective surgical programme and consolidates surgical pre-assessment under one roof. In addition, the Trust partners with neighbouring hospitals to provide tertiary services and is part of the regional partnership and network models of care, such as the trauma network. Surrounded by woodlands and green, we are a 'Hospital in a Forest'. We believe there are health benefits to be gained from time spent in nature, particularly on physical and mental health. We hope to integrate this philosophy into our Trust as a whole, from the way our buildings are designed to the way we deliver care, to secure and maximise these benefits for our community.

Our improvement journey

We are improving the way in which we deliver care.

The Trust was placed in special measures in June 2015 after a Care Quality Commission (CQC) inspection in May 2015. QEH came out of special measures following a further inspection in June 2015, but this improvement was not sustained and we were rated 'inadequate' following an inspection in September 2018.

In March 2019, the CQC returned to inspect the Trust's core services. This resulted in Section 31 and Section 29A warning notices placing conditions on our registration as a provider of healthcare, which required immediate action. In July 2019, the CQC rated us as 'inadequate' overall with a recommendation that we be placed back in special measures. The CQC returned to QEH to carry out an unannounced focused core service inspection in September 2020 and published its report in December. Although this report highlighted the significant improvements and progress which have been made over the previous 12-months, the Trust's overall rating cannot be changed until the CQC carries out a full on-site inspection.

Our vision

In June 2020, we launched our five-year Corporate Strategy which articulates our vision to be:

'the **best** rural District General Hospital for **patient** and **staff experience.**'

Our strategy

Our staff, patients and local partners are important to us and we are passionate about creating a QEH that they can be proud of. That is why our mission is:

'working with **patients**, **staff** and **partners** to improve the health and clinical outcomes of our **local communities**.'

To achieve this, we have identified three main priorities:

QUALITY
ENGAGEMENT
HEALTHY LIVES

These priorities are supported by six strategic objectives as part of the Trust's overall strategy.

OUR GREEN PROMISE IS PART OF THE OVERALL TRUST STRATEGY

QUALITY

Strategic Objective 1

To consistently provide safe and compassionate care for our patients and their families

Strategic Objective 2

Modernising our hospital (estate, digital infrastructure and medical equipment) to support the delivery of optimal care.

ENGAGEMENT

Strategic Objective 3

Strengthening staff engagement to create an open culture with trust at the centre

Strategic Objective 4

Working with patients and system partners to improve patient pathways and ensure future financial and clinical sustainability

HEALTHY LIVES

Strategic Objective 5

Supporting our patients to improve health and clinical outcome.

Strategic Objective 6

Maximising opportunities for our staff to achieve their true potential so that we deliver outstanding care

OUR GREEN PROMISE

- Reduce energy usage across our estate, eliminating the use of fossil fuels and increasing use of renewable energy sources by 2032
- Support a shift to electric and ultra low emission vehicles in our own fleet and ensure easy access to vehicle charge points for patients and staff
- Help our suppliers switch to electric vehicles by exploring how we can include them in our transport plans and contracts
- Implement the NICE guidelines on medicines optimisation and reduce our use of anaesthetic gases which are harmful to the environment
- As part of our Digital Strategy, continue to reduce our reliance on paper-based systems and to enable improvements in the quality of clinical decision making thorough the use of digital aids such as electronic prescribing, reducing the likelihood of unnecessary length of stay and admission to hospital
- Where clinically appropriate, develop our clinical pathways, with our local and regional partners so that they provide both quality and sustainable care for our patients by prioritising care closer to home, reducing readmissions and length of stay which we will develop into low carbon pathways
- Use our local influence to set environmental, social and governance standards in our local contracts in line with the NHS Supplier Road Map. We will use the sustainability and social value provisions in national frameworks to maximum effect to reduce emissions in our supply chain
- We will ensure that there is leadership for sustainability at every level of the organisation and that staff are empowered through our benefits provision and in embedding sustainability into our everyday practice
- We will be sustainability leaders in our community. Our Board will engage with our patients, workforce and local community through participatory forums and other mechanisms to maintain and improve our Green Plan, accelerating our journey to net zero where possible
- To work with local health, social care, government and other agencies to create a system wide approach to adaptation to climate change to minimise the effects of climate hazards on our local community

SUSTAINABILITY AT QEH

OUR JOURNEY SO FAR

2019

QEH becomes one of the first hospitals in the UK to install a wind turbine

2020

QEH develops a Sustainable Development Management Plan

2021

QEH develops a New Hospital Programme (NHP) business case

CURRENT STATE

NHS CARBON FOOTPRINT

Scope 1 (Direct):

- Fossil fuels
- NHS facilities
- Anaesthetics
- NHS fleet and vehicles

Scope 2 (Indirect):

- Electricity

Scope 3 (Indirect):

- Energy
- Business travel
- Waste
- Water
- Metered dose inhalers

Travel (Outside GHGP scopes):

- Patient, visitor travel

Scope 3 (Indirect):

- Medical devices
- Medicines
- Food and catering
- Staff commuting
- Business services
- ICT
- Commissioned health services outside the NHS
- Construction
- Freight transport
- Manufacturing

NHS CARBON FOOTPRINT PLUS

OUR AMBITION

Our greatest opportunities to reduce our carbon footprint are in:

- Estates and Facilities
- Medicines and chemicals
- Supply chain

2032

Meet the NHS 80% reduction target by 2032 by reducing our carbon footprint by 5,000 tCO2e

ESTATES & FACILITIES

Overview

Direct Greenhouse Gas (GHG) emissions from buildings, mainly for heating, accounts for 17% of UK emissions whilst also contributing to air pollution. Electricity use in buildings account for about 59% of all electricity consumption in the UK. This is over 118 mtCO2e per year.

The NHS use of estates and facilities represents around 15% of the total carbon profile so the NHS has committed to a series of measures to support organisations to:

- Develop and apply Zero Carbon Hospital Standard to the New Hospitals Programme
- Upgrade and optimise the use of buildings by 2034 with energy efficient measures
- Provide support with on site renewable energy and heat generation

What this means for QEH

Heating, lighting and operating the hospital is our largest directly controllable source of emissions, contributing approximately 9,300 mtCO2e per year.

As such our aim is that our New Hospital Programme will result in more efficient facilities, for example LED lighting and better insulation, but we also need to look at how we can operate our building in a more sustainable way with a reduction of c.5,000 tCO2e per year by 2031 projected to help us achieve the NHS target to reduce direct emissions by 2032. This includes a BAU option to optimise the use of our current estate through the introduction of energy efficiency measures and phasing out the use of fossil fuels to heat our buildings. The single-phase solution for the new hospital, which is the Trust's preferred option, maximises the benefits of Modern Methods of Construction (MMC), Net Zero Carbon (NZC) technology, Digital First and emerging technologies.

Our hospital led the way in establishing self-generated renewable energy with the development of our wind turbine in 2016. This generates up to 11% of our energy usage and we are investigating further options to expand our renewable energy supply as part of the New Hospital programme so that 100% of our energy is generated or purchased from renewable sources.

Finally we recognise that over 42% of our non-pay supply chain spend on contracts relates to our estates and facilities. Therefore, as set out in the section on supply chain, careful management of our contracts for food, water, wase and materials in our buildings will also be essential in achieving our target. This is a key aspect of our new hospitals programme.

OUR PROMISE

READY: 6 TO 12 MONTHS

Establish Governance:

- Appoint a climate lead and establish governance, both within the hospital but also with our partners by ensuring estates delivery plans are aligned

Baseline and scope:

- Obtain and review the baseline calculations developed as part of the New Hospital Strategic Outline Case
- Review current facilities services including food and nutrition against the use of low carbon alternatives

Roadmap

- Develop a route to net zero for our estates and facilities making use of the Capital Planning Tool

SET: 12 TO 24 MONTHS

Refine and explore

- Refine the hospital net zero target following the next stage of approvals and any additional work

Develop a plan

- Assess and identify further opportunities in the use of buildings and facilities to reduce footprint
- Commit to the use of low carbon and local alternatives in food, and consumables including plastics
- Define measurement and reporting arrangements to keep on track
- Integrate the net zero plan with assets and maintenance plans for any retained estate

GO GREEN: BY 2032

Refine and sign off

- Consider the installation of smart meters and other methods for monitoring and management of energy usage
- Deliver our New Hospitals Programme (NHP) saving at least 5,000 tCO2e per annum

TRAVEL & TRANSPORT

Overview

Transport from road vehicles represents 22% of total UK GHG emissions and is a major source of air pollution.

Approximately 3.5% (9.5 billion miles) of all road travel in England relates to patients, visitors, staff and suppliers to the NHS, contributing around 14% of the system's total emissions. This includes:

- 4% for business travel and fleet transport, 5% for patient travel
- 4% for staff commutes; and
- 1% for visitor travel

What this means for QEH

We need to support our staff, patients and visitors to travel in a more sustainable way. We know that public transport and active travel (like walking or cycling) are great options but not right for everyone, meaning driving is sometimes the only practical option.

We are on our way with two electric vehicle charging points which are in full use but more needed. As part of our new hospital programme we intend to increase these as part of a shift to electric and ultra low emission vehicles through ensuring easy access to vehicle charge points, and through having dedicated parking.

Staff commuting to the hospital is a major source of emissions, we can help our staff be more sustainable through learning and development, and supporting ultra low emission vehicles through our work car lease scheme. We can also ensure our facilities, like bike storage and changing rooms are fit for purpose and their usage encouraged.

Deliveries and travel by our suppliers and contractors can also be reduced. We can help shift our suppliers to electric vehicles by stipulating this in our procurement and approach to contracting.

Travel and transport are also major sources of air pollution, and contribute to reduced health outcomes, so whilst some of our fleet isn't ready to be electrified yet, we will make sure we minimise both pollution and emissions.

OUR PROMISE

READY: 6 TO 12 MONTHS

- Review and align with local authority Sustainable transport plans
- Develop the Car Parking strategy in line with the selected option for the new hospital programme
- Only allow Ultra Low Emission Vehicles through our staff lease car scheme

SET: 12 TO 24 MONTHS

- Review our fleet transport agreement using the sustainability provisions in the national framework to move away from fossil fueled vehicles
- Increase the number of EV charge points for staff and visitors in line with the new hospital plan

GO GREEN: BY 2032

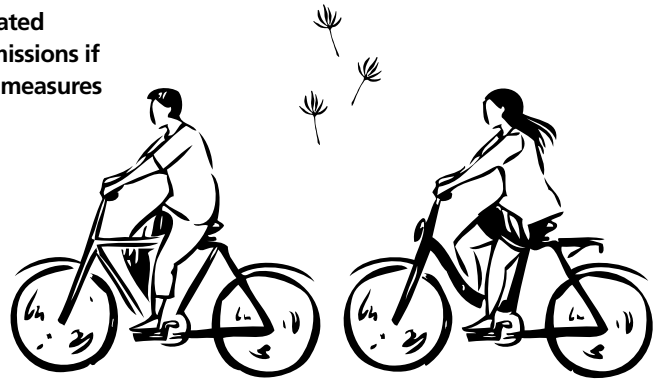
In line with Greener NHS targets:

- 90% of our fleet to move to low emissions vehicles
- In line with the NHS People Plan, implement a green travel plan enabling staff to be offered flexibility in their working patterns and supported to choose sustainable methods of transport for their commute.

14% **% Contribution of CO2e emissions fleet plus staff and patient transport QEH**

30% **National estimated reduction in emissions if recommended measures are introduced**

28% **% Contribution of transport to local emissions in county**



MEDICINES & EQUIPMENT

Overview

The Royal Pharmaceutical Society declared a climate emergency in September 2021 and cited three major impacts which medicines have on the environment:

- The chemical effects of Active Pharmaceutical Ingredients (APIs) such as the use of nitrous oxide and Desflurane in anaesthetics and Metered-dose inhalers (MDIs) which contain hydrofluoroalkane (HFA) as propellants. MDIs contribute an estimated 3.9% of the carbon footprint of the NHS in the UK, because HFAs are potent GHGs
- Pharmaceutical waste represents not only a significant contribution to the carbon footprint of the NHS but also represent a cost to the system through medicines wastage both by patients and organisations of up to £300m per year
- The large carbon footprint involved in manufacture and distribution of medicines

What this means for QEH

Pharmaceuticals, medicines and blood products represent a significant spend (c. £18m per annum) and likely a significant proportion of our hospital's carbon footprint.

Our Medicines Optimisation Strategy already aims to make medicines optimisation part of our routine through the safe and evidence based dispensation of medicines as well as cost efficiencies in the supply of medicines.

With regards to the use of anaesthetic gases we have committed to the national target of reducing the use of desflurane in surgery to less than 10%.

It is our ambition to build on our work to date by developing our strategy in line with NICE guidance to realise both the savings and the corresponding reduction in GHGs though application of the guidance in partnership with health and social care organisations across Norfolk and Waveney, our staff and patients.

NICE estimates that implementation of its guidance on Medicine Optimisation could save per year per 100,000 population

202 tonnes of greenhouse gas emissions
For QEH's local health economy this could mean **564 tonnes**

0.84 million cubic metres of fresh water
For QEH's local health economy this could mean **2.34 million cubic metres**

24 tonnes of waste
For QEH's local health economy this could mean **67 tonnes**

OUR PROMISE

READY: 6 TO 12 MONTHS

- Review implementation of the NICE guidance on Medicines Optimisation in the context of the supplementary report on sustainability
- Undertake a clinical review of and baseline the use of Desflurane and Nitrous Oxide in Anaesthetics and any MDI inhalers
- Ensure that the required targets are incorporated into BAU governance of medicines

SET: 12 TO 24 MONTHS

- Develop a clinically appropriate response to the NHS target to reduce and dispose of harmful anaesthetic gases
- Have an appropriate plan to achieve a reduction in the use of harmful anaesthetic gases to less than 10%
- Work with local primary care providers to reduce and replace where clinically appropriate lower green house gas emitting in in inhalers and other medicines and to participate in appropriate disposal schemes

GO GREEN: BY 2032

- Achieve and maintain target to reduce the proportion of desflurane to sevoflurane used in surgery to less than 10% by volume
- Eliminate, where clinically appropriate any lower carbon inhalers prescribed in the acute setting
- Maintain an annual review of the use of lower carbon alternatives to medicines as part of our medicines strategy

SUPPLY CHAIN & PROCUREMENT

Overview

Reducing supply chain emissions are a priority because the manufacture and supply of goods to hospitals and healthcare services make up a large part of the health sector's greenhouse gas emissions.

Globally 70% of GHG emissions are attributable to the supply chain for healthcare organisations. For the NHS this is estimated to be around 62%.

What this means for QEH

Of our total spend for 2020/21 £70 m was in non-pay costs, excluding medicines, over 25% of total spend. A large proportion of this presents considerable opportunity to leverage our supply chain and influence the wider impact which we have on the environment.

With over half of our non-pay procurement off contract or using local tenders we have a significant opportunity to both prioritise local suppliers and include environmental social and governance provisions within our contracts. We are already working with our local suppliers to rationalise and streamline our procurement across the Norfolk and Waveney Integrated Care System as part of a procurement collaboration which has committed to sustainable procurement in our area.

We will leverage the provisions in national frameworks so that we make maximum use of the sustainability mechanisms included, prioritising those areas identified in national plans which make up a significant proportion of our spend such as Building and Engineering products or those which have a disproportionate impact on the environment such as medical gases.

OUR PROMISE

READY: 6 TO 12 MONTHS

- Undertake a supply chain maturity assessment
- Baseline our Scope 3 emissions based on spend
- Identify priority areas and set targets for immediate action
- Inform suppliers of the new and pending provisions under the Supplier Roadmap

SET: 12 TO 24 MONTHS

- Review local and framework supplier arrangements
- Understand the decarbonisation plans, where possible of significant suppliers
- Develop a set of environmental, social and governance standards for local contracts and targets for the use of local suppliers
- Developed a Sustainable Supply Chain Strategy aligned to the Trust Strategy and Green Plan

GO GREEN: BY 2032

- Develop measures and targets aligned to local and national targets
- Set a clear ambition to track and reduce the CO2e in our supply chain
- Be clear and public in the environmental social and governance standards we expect of our suppliers

MODELS OF CARE

Overview

Health care is a significant contributor to overall global emissions and in the UK is the largest single public sector contributor (4% of UK GHG emissions) according to the King's Fund.

Carbon dioxide emissions attributable to the NHS in England alone are greater than the total emissions from all aircraft departing from Heathrow airport.

Climate change is not only having a direct operational effect on the services we need to deliver and the way in which we should manage our resources to reduce the impact of environmental change. There are clear parallels between many NHS system objectives, local operational priorities and sustainability.

What this means for QEH

QEH, like healthcare organisations across the NHS and globally continues to face significant challenges. These include aging populations, greater prevalence of long term conditions, and increasing demand on urgent and emergency care services, which is made more complex by the ongoing pandemic. This means that elective care waiting lists continue to grow while local health services must continue to support the prevention and treatment of the virus.

Responding to these challenges, not only helps create safe and effective care but sustainable care for patients though a reduction in unnecessary appointments and stays in hospital, reducing length of stay and readmissions.

NICE estimates that for every bed day in hospital there are around 63.7kg CO2e emissions and Greener NHS estimates that optimising the location of care could save up to 1.7ktCO2e of carbon per year, meaning that improvements in length of stay or readmission rates mean not only improvements in quality of care but cost and environmental impact.

Our Clinical Strategy supports the development of sustainable improvements to care through prioritising the improvement in the quality of where, how and what care is received.

OUR PROMISE

READY: 6 TO 12 MONTHS

- Understand the current impact of key quality indicators on our Carbon Footprint
- Work with our clinicians and local ICS partners to understand our direct and indirect footprint along care pathways
- Align performance reporting to the resulting reduction in emissions where possible

SET: 12 TO 24 MONTHS

- Set a baseline and target against relevant indicators such as length of stay and readmission rates and incorporate them into our performance reports
- Identify a set of priority areas to develop low carbon pathways

GO GREEN: BY 2032

- Align our care pathways so that where clinically appropriate they are low carbon pathways particularly where they impact length of stay, readmission and unwanted variation in care taking into account best practice

Our six Strategic Clinical Priorities	How they align to our Green Plan
• Provide safe alternatives to emergency admissions and to focus admissions on patients who need them most • Optimise length of stay for all patients (elective and emergency)	Where we provide care means that we reduce not only the use of transport to get to hospital but the use of our precious resources in unnecessary treatment
• Improve the quality of inpatient care by modernising in line with 7-day services, NHSE/I advice, using technology and focusing on what our population really needs • Transform outpatient services using technology to become a more responsive, patient focused service	How we provide care through maximising the use of technology, providing digital services and transforming models of care to support 7-day services, system-wide pathways of care, enhanced use of technology, and moving to a population health approach with prevention at the heart
• Improve maternity care in line with national recommendations • Improve access and reduce inequalities of access for patients on our waiting lists and address the pandemic related backlog	What care we provide, that is evidence based, and the right care at the right time for the right patients improves outcomes, reduces health inequalities and the burden of diseases on our local population so that we maximise our use of resource and reduce our impact on the environment

WORKFORCE & SYSTEM LEADERSHIP

Overview

The NHS is currently seen as a world leader in developing a strategic approach towards sustainability, with the establishment of an NHS Sustainable Development Unit in 2008 and the publication of the 'NHS Carbon Reduction Strategy' in 2009 and 'Delivering a Net Zero Health Service' in the midst of the COVID-19 pandemic in 2020.

The Greener NHS programme shows system level leadership in defining and tracking progress towards the NHS 2040 target.

Requirements for provider organisations is set out in the NHS Standard Contract, Service Conditions Section 18.

What this means for QEH

We know that leadership 'ward to Board' is key to effective, lasting change within our organisation. That is why we started with appointing a Board level lead for Sustainability, Chris Benham, our Director of Finance.

Going forward, as set out in our Sustainable Development Management Plan we have aligned our Trust Strategy and Workforce Strategy to this Green Plan to ensure our journey to becoming a sustainable organisation is underpinned by strong environmental, social and governance objectives as set out in our Green Promise.

This will begin with identifying those people within our organisation best placed to lead in key areas of focus and setting up a reporting group to drive progress against each of the actions we have committed to in this plan.

We will ensure that Board level leadership and assurance is provided though the executive lead for sustainability as well as communicated through staff and patient forums.

Aligning our Workforce Strategy to our Green Plan

RECRUIT

Develop our recruitment approach and staff benefits package to include sustainable options such as:

- virtual assessments
- cycle to work
- electric car leasing

We will also work with local partners to develop more sustainable transport options to work.

RETRAIN

Incorporate sustainability into staff training in key areas to upskill staff and equip them to lead our Green Plan as part of everyday practice.

MANAGE WELL

Identify Green Champions and professional leads to sit on our Sustainability Group to raise awareness and drive achievement of our Green Promise.

OUR PROMISE

READY: 6 TO 12 MONTHS

- Review Board level reporting framework and ensure that reporting against Greener NHS requirements and section 18 of the NHS Contract
- Submit Green Plan to Norfolk and Waveney health and Care Partnership ICS and refine Green plan in line with any system level commitments
- Establish a Sustainability Reporting group with representation for each Green Plan area of focus and ensure that there is a clear line of sight to a Board level output

SET: 12 TO 24 MONTHS

- Develop a communication and engagement plan alongside the Green Plan to engage staff and patients with any sustainability initiatives as they are rolled out
- Review and develop staff training in key areas of focus such as medicines optimisation of use of facilities to incorporate sustainable behaviours into everyday activity
- Revise staff benefits and policies to accelerate or incorporate sustainable initiatives such as cycling schemes or discounts on local transport

GO GREEN: BY 2032

- Develop and participate in a reginal sustainability network to track, report and celebrate achievement of the requirements in the NHS Standard Contract

Overview

Adaptation in relation to health and social care are actions or processes that reduce mortality and morbidity associated with climate change, while strengthening the sector's capacity to provide a high standard of care while the climate changes.

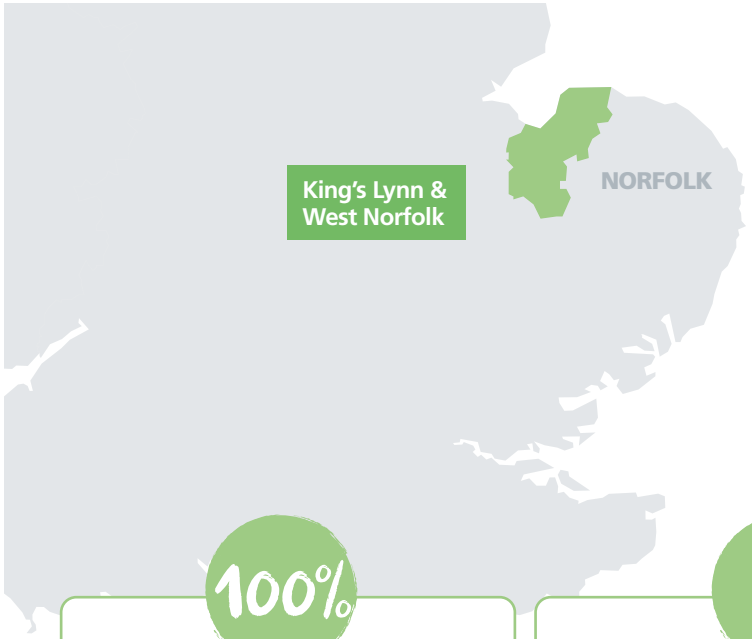
The UK's climate is already changing; there is an increased likelihood of extreme weather events, heavier rainfall – with increased risk of flooding, higher sea levels and more and longer heat waves. This will impact rates of flooding and coastal erosion, water quality and resources, biodiversity, soils and land use and infrastructure and health impacts.

The Third Health and Care Adaptation Report published this month describes the current and future effects of climate change on health care. It describes the impact of climate hazards such as heatwaves and flooding on buildings, people, system resilience, communities and settlements. It lays the foundations for actions that organisations like ours must take.

What this means for QEH

Local level:

The Borough Council of King's Lynn and West Norfolk declared a climate emergency in summer 2021. The Council net zero target was brought forward to 2035 from 2050 and a Climate Change Strategy and Action Plan 2021-2024 was created. Adapting to the effects of climate change is fundamental in ensuring the survival and longevity of the hospital, with numerous lives depending on it. Flooding seems to be the number one issue that the hospital and the local community face due to it's location.



100%

Action is needed to prepare and protect the hospital during times of flooding. Adaptation measures could be planting trees as a flood defence or installing back up generators to ensure power during times of flooding.

5%

The hospital is situated south of a flood zone and is thus at higher risk of flooding. Bawsey Drain may also contribute to this risk. However, the woodland between the flood zone and hospital acts a designated floodplain.

3.3%

This risk is due to rainfall surrounding the hospital.

OUR PROMISE

READY: 6 TO 12 MONTHS

- Review existing continuity plans in line with revised national EPRR frameworks to describe QEH's readiness to respond to climate risks
- Carry out a climate risk assessment once an initial baseline of climate risks and readiness is undertaken, ensure this is included on the Trust Risk Register
- Identify an Adaptation lead at executive or senior management level

SET: 12 TO 24 MONTHS

- Develop mitigations against identified risks aligned to local ICS and recommendations from the assessment
- In line with the Workforce and leadership activities develop training to staff about the potential climate risks and emergency procedures

GO GREEN: BY 2032

- Build Long term adaptation planning into our Green Plan by 2025 with an active assessment and management plan against known risks

DIGITAL TRANSFORMATION

Overview

The NHS is undergoing a period of rapid acceleration to become a digitally enabled service making access to patient care easier and reducing our need to rely on inefficient manual systems.

These goals align with those of Greener NHS and the COVID-19 pandemic has allowed us to achieve a greater level of digitisation than we thought possible in a short period.

Trusts now need to align digital, clinical and sustainability plans to carefully balance the impact of rapid technological infrastructure development against the benefits of safer, more efficient care, closer to home.

What this means for QEH

Organisations are responding to the challenge to transform digitally, to keep abreast of our increasingly digitised society and most importantly, leverage technological innovation to enable wider transformation.
This can be achieved through

- More personalised care for patients, including remote services
- Greater transparency to improve user experience
- Increased safety through the elimination of manual processes, which increase the risk of error
- Enhanced ability to draw insights from data, reducing the cost and time needed to generate new evidence on the effectiveness of interventions
- Improved operational and cost efficiencies through the greater automation of processes, and a reduction in the cost of ongoing support and maintenance

Each of these benefits may initially have an associated increase in activity and corresponding GHG emissions due to the need to develop infrastructure. As such the NHS wants organisations to align their Digital Transformation agendas with sustainability so that the benefits in reduced travel, unnecessary admissions and variation, and use of data to identify, implement and track local carbon alternatives can be balanced alongside technological infrastructure acceleration.

At QEH our Digital Workplan is aligned with the Trust Strategic objectives. The business objectives set out in the Workplan closely align to the principles set out so far in this Green Plan. As such, we commit to undertaking a baseline ICT Footprint review and to assesses how each planned development might impact our journey to Net Zero.

OUR PROMISE

READY: 6 TO 12 MONTHS

- Undertake a Baseline ICT footprint in line with published materials by HMG Sustainable Technology Advice & Reporting (STAR)
- Review existing Digital Workplan objectives and assess the potential impact an CO2e in development and potential savings when implemented

SET: 12 TO 24 MONTHS

- Align reporting on Digital Maturity to the ICT footprint baseline assessment and progress
- Ensure that the next iteration of the Digital Workplan is aligned to the NHSX What Good Looks Like Framework and the Sustainable ICT and Digital Services Strategy objectives along with ICS partners

GO GREEN: BY 2032

- Have a fully aligned clinical, sustainability and digital set of strategies which plan and track continuous improvements to care at QEH which is resilient to system disruptors such as COVID-19

How key elements of our Digital Workplan align to sustainability

Reduction in the use of paper based systems such as Electronic Document Management and Electronic paper record not only reduce administrative time but reduces the use of paper and other disposable items.

Developments which support medicines management including the Chemotherapy System and Electronic Prescribing reduce the risk of medicine error and wastage which according to NICE could save up to eight bed days per incident and 63.7 kg CO2e per bed day.

The implementation and upgrade of networked and electronic systems such as electronic referrals remote monitoring, e-requesting and clinical comms improve efficiency within the Trust and reduce the need for unnecessary travel which contribute to reductions in admissions, length of stay and cost. This has a direct impact on the use of energy and resulting GHG emissions.

Overview

Regular, accurate and robust monitoring and reporting is essential if the NHS is to meet its Net Zero targets.

Annual sustainability reporting is now mandated for Clinical Commissioning Groups (CCGs) and Trusts. This will include quantitative progress data, covering our greenhouse gas emission in tonnes, emissions reduction projections and an overview of our strategy to deliver those reductions.

Established sustainability indicators on the Greener NHS Dashboard which includes anaesthetics, inhalers and building energy use, will be reviewed in light of the new Net Zero commitments and used to monitor and understand the scale of the challenge and progress across the NHS. Trusts will be required to include these indicators in their Annual Report.

This will be supported by efforts to embed sustainability into the common data pipeline for the system. New data collection methods are being developed to enable more granular calculation of carbon footprints at regional, ICS and Trust levels.

Governance and risk

We will use our current governance structure to enable effective monitoring and reporting by holding the Trust accountable to its Green Promise and Net Zero targets.

Our Chief Executive, alongside our Board-level Sustainability Lead, are committed to a greener QEH as outlined by the actions in this Green Plan.

We will establish a dedicated Sustainability Committee to be the driving force of our sustainability agenda and provide oversight on our green performance.

We will seek representation from professional groups and expertise aligned to the areas of focus in this plan (for example estates, transport, medicines and digital) and this Committee will report via executive committees to the Trust Board.

We are committed to undertaking a near-term, mid-term and long-term climate risk review within the next 12 months to understand and begin to build our climate resilience.

Reporting

We will report the progress of our Green Plan in our Trust Annual Report and work towards incorporating Green Plan KPIs into our Integrated Performance Report.

Sustainability indicators are already reported nationally through a range of systems such as the Greener NHS Dashboard and the optional Sustainability Reporting Portal tool, to support action to deliver on current commitments. We will carry out a current state assessment of our green performance to establish a baseline, decide our Key Performance Indicators (KPIs) - taking those currently established by the Greener NHS Data Collection into review - and agree on a trajectory to meet our net zero targets. We will include these indicators in our performance reports report to help us track our progress, benchmark against national Trust performance and inform a regular update of the NHS emissions profile. This will include:

- Annual sustainability report
- Sustainable Development Assessment Tool (SDAT)
- A qualitative self-assessment tool to help the Trust evaluate its
- Sustainability performance and identify improvement areas
- SDU Sustainability Reporting Portal
- A tool to support annual sustainability reporting
- Estates Returns Information Collection (ERIC)
- Mandatory reporting for NHS Trusts that covers energy, water, waste and transport data
- Internal data collection and tracking

Communication and engagement

To successfully implement our Green Plan and build a more sustainable QEH, we need the support of the QEH community. We will communicate both our Green Plan and the broader NHS green agenda to our staff, volunteers, patients, visitors, and local partners to help them understand our plans and how they can support us to achieve them. To create sustainability knowledge and make the case for our Green Plan, our communication strategy will involve:

- Training - e-Learning sustainability modules, interactive virtual and in-person sessions, staff mentoring
- A sustainability forum with wide staff representation
- Sustainability themed events, including partnering with the local council

We want to engage our community and empower them to take action and lead the effort for more sustainable practices. To encourage sustainable practices, we will introduce:

- Sustainability champions in each team/workstream
- Sustainability scheme competitions to give staff the opportunity to launch their own initiatives

Finance

Some of the prescribed interventions will be cost-neutral while others require initial capital investment which will provide cost savings in the long-term. Some interventions will even provide a cost benefit. Along with our baseline assessment we will evaluate any cost efficiencies or long term value for each intervention and undertake some key initiatives to maximise the income and savings potential of this plan including:

- Identify new funding arrangements or partners (e.g. alternatives to the PPA agreement used for the wind turbine)
- Seek additional funding and identify cashable and non-cashable savings as part of QEH bid to receive funding as part of the Government's hospital building programme (Health Infrastructure Plan)
- Seek additional sources of funding to support the net zero transition such as the Public Sector Decarbonisaiton Scheme
- Requirement for inclusion of net zero principles in all plans, upgrades and maintenances to effectively reduce future

OUR GOALS

Our goal is to be a national leader in sustainable healthcare practices. By taking responsibility of our carbon contribution and committing the NHS targets, we will fulfil our green promise across each area of focus. Our plan can be broken down into four long-term goals:

ZERO-CARBON QEH

- **Net-Zero by 2032 for emissions we control directly**
- **Net-Zero by 2045 for emissions we can influence**
- **Establish sustainability indicators and develop targets for year-on-year reductions**

CLEANER QEH

- **Increase our use of renewable energy sources and eliminate the use of fossil fuels**
- **Promote sustainable travel options and ultra low emission vehicles for staff, patients and local suppliers**
- **Optimise our operational transport policies and activities to reduce air pollution**

DIGITAL QEH

- **Leverage available technology and new innovations to reduce our paper waste and water usage**
- **Adopt digital aids and telehealth digital tools to reduce emissions and costs associated with patient travel and improve resource allocation**
- **Embed digital ways of working in to our workforce strategy**

IMPACTFUL QEH

- **Champion sustainability in our community by using our influence to set environmental, social and governance standards, and encourage more sustainable practices from our local partners**
- **Embed sustainability into everyday practice, including reducing the use of single plastic products**
- **Partner with local health, social care, Government and other agencies to create a system-wide approach to climate change**

OUR PLAN - DIRECT INTERVENTIONS

READY: 6 TO 12 MONTHS

Establish Governance:
- Appoint a climate lead and establish governance, both within the hospital and with our partners

Baseline and scope:
- Obtain and review the baseline calculations developed as part of the New Hospital SOC
- Review current facilities services including food and nutrition against the use of low carbon alternatives

Roadmap:
- Develop a route to net zero for our estates and facilities making use of the Capital Planning Tool

- Review and align with local authority Sustainable Transport Plans
- Develop the Car Parking Strategy in line with the selected option for the New Hospital Programme

- Review and implement the NICE guidance on Medicines Optimisation
- Undertake a clinical review of and baseline the use of Desflurane and Nitrous Oxide in Anaesthetics

- Undertake a Supply Chain maturity assessment
- Baseline our Scope 3 emissions based on spend
- Identify priority areas and set targets for immediate action

SET: 12 TO 24 MONTHS

Refine and explore
- Refine the hospital net zero target

Develop a plan:
- Assess and identify further opportunities to reduce estates footprint
- Define measurement and reporting arrangements to keep on track
- Integrate the net zero plan with assets and maintenance plans for any retained estate

- Only allow Ultra Low Emission Vehicles through our staff lease car scheme
- Review our fleet transport agreement to move away from fossil-fuelled vehicles
- Increase the number of electric vehicle charge points for staff and visitors

- Develop a clinically appropriate response to the NHS target to reduce harmful anaesthetic gases
- Set an appropriate target of at least a 10% reduction in the use of harmful anaesthetic gases
- Work with local primary care providers to reduce and replace where clinically appropriate, lower greenhouse gas emitting inhalers and other medicines
- Participate in appropriate schemes

- Review local and framework supplier arrangements
- Understand the de-carbonisation plans of significant suppliers
- Develop a set of environmental, social and governance standards for local contracts and targets for the use of local suppliers
- Develop a Sustainable Supply Chain Strategy aligned to the Trust Strategy and Green Plan

GO GREEN: BY 2032

Refine and sign off:
- Consider the installation of smart meters and other methods for monitoring and management of energy usage
- Deliver our New Hospitals Programme (NHP) saving at least 5,000 tCO2e per annum

- 90% of our fleet to move to low emissions vehicles
- Implement a green travel plan enabling staff to be offered flexibility in their working patterns and supported to choose sustainable methods of transport for their commute

- Achieve and maintain target to reduce the proportion of Desflurane to Sevoflurane used in surgery to less than 10% by volume
- Eliminate, where clinically appropriate any lower carbon inhalers prescribed in the acute setting
- Maintain an annual review of the use of lower carbon alternatives to medicines as part of our medicines strategy

- Develop measures and targets aligned to local and national targets
- Set a clear ambition to track and reduce the CO2e in our supply chain
- Be clear and public in the environmental social and governance standards we expect of our suppliers

OUR PLAN - OTHER AREAS OF FOCUS

READY: 6 TO 12 MONTHS

- Understand the current impact of key quality indicators on our Carbon Footprint
- Work with our clinicians and local ICS partners to understand our direct and indirect footprint along care pathways
- Align performance reporting to the resulting reduction in emissions where possible

- Review Board-level reporting framework and ensure that reporting against Greener NHS requirements and Section 18 of the NHS contract
- Submit Green Plan to Norfolk and Waveney Health and Care Partnership ICS and refine Green Plan in line with any System level commitments
- Establish a Sustainability Reporting Group with representation for each Green Plan area of focus and ensure that there is a clear line of sight to a Board-level output

- Review and implement the NICE guidance on Medicines Optimisation
- Undertake a clinical review of and baseline the use of Desflurane and Nitrous Oxide in Anaesthetics

- Undertake a Baseline ICT footprint in line with published materials by HMG Sustainable Technology Advice & Reporting (STAR)
- Review existing Digital Workplan objectives and assess the potential impact an CO2e in development and potential savings when implemented

SET: 12 TO 24 MONTHS

- Set a baseline and target against relevant indicators such as length of stay and readmission rates and incorporate them into our performance reports
- Identify a set of priority areas to develop low carbon pathways

- Develop a communication and engagement plan alongside the Green Plan to engage patients and staff with any sustainability initiatives as they are rolled out
- Review and develop staff training in key areas of focus such as medicines optimisation of use of facilities to incorporate sustainable behaviours into everyday activity
- Revise staff benefits and policies to accelerate or incorporate sustainable initiatives such as cycling schemes or discounts on local transport

- Develop mitigations against identified risks aligned to local ICS and recommendations from the assessment
- In line with the workforce and leadership activities, develop training to staff about the potential climate risks and emergency procedures

- Align reporting on digital maturity to the ICT footprint baseline assessment and progress
- Ensure that the next iteration of the Digital Workplan is aligned to the NHSX 'What Good Looks Like' framework and the Sustainable ICT and Digital Services Strategy objectives along with ICS partners

GO GREEN: BY 2032

- Align our care pathways so that where clinically appropriate they are low carbon pathways particularly where they impact length of stay, readmission and unwanted variation in care taking into account best practice

- Develop and participate in a regional sustainability network to track, report and celebrate achievement of the requirements in the NHS Standard Contract

- Build long term adaptation planning into our Green Plan by 2025 with an active assessment and management plan against known risks

- Have a fully aligned Clinical, Sustainability and Digital set of strategies which plan and track continuous improvements to care at QEH which is resilient to system disruptors such as COVID-19

GLOSSARY

A

APIs - Acute Pharmaceutical Ingredients

Acute care - Acute care is a branch of secondary health care where a patient receives active but short-term treatment for a severe inury.

ALOS - Average Length of Stay

B

Biohazard - A risk to human health or the environment arising from biological work, especially with micro-organisms

C

Carbon footprint - The amount of carbon dioxide emissions associated with all the activities of a person or other entity

Climate change - A change in the state of the climate that can be identified (using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer

CMS - Centres for Medicate and Medicaid services

CO2 - Carbon dioxide

CQC - Care Quality Commission

E

EPRR - Emergency preparedness, resilience and response

EV - Electric vehicle

F

Fossil fuels - Carbon-based fuels from fossil hydrocarbon deposits, including coal, oil and natural gas

G

GHG - Greenhouse gases are gases that absorb and emit radiation, trapping heat in the atmosphere and creating the 'greenhouse effect'

GHGP - The Greenhouse Gas Protocol (GHGP) is the global standard for greenhouse gas accounting. It covers a wider set of emissions than the 2008 Climate Change Act which set national targets for carbon emission reduction, against a 1990 baseline. However, these targets do not cover the full scope of emissions from the NHS. Use of the GHGP also helps support international comparison and transparency.

H

HFA - Hydrofluoroalkane

I

ICS - Integrated care systems

Inpatient care - Inpatient care is the care of patients whose condition requires admission to a hospital

L

LED - Light-emitting diode

LOS - Length of stay

M

MDIs - Metered-dose inhalers

MtCO2e - Metric tons of carbon dioxide equivalent

N

Net zero - Net zero emissions are achieved when anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period

NICE - National Institute for Health and Care Excellence

NREL - The US Department of Energy's National Renewable Energy Laboratory

O

Outpatient care - Outpatient care, also called ambulatory care, is anything that doesn't require hospitalisation

P

PPA - Purchasing Power Agreement

GLOSSARY

R

RFP - Request for proposal

S

Scavenging - The collection and removal of vented anaesthetic gases from operating rooms

Scope 1 - Direct greenhouse emissions that occur from sources that are controlled or owned by an organization (e.g., emissions associated with fuel combustion in boilers, furnaces, vehicles

Scope 2 - Indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling

Scope 3 - Indirect emissions that are not covered in Scope 2, such as business travel, employee commuting, waste generation, and product transport

Sustainability - Meeting the needs of the present without compromising the ability of future generations to meet their own needs. It aims to strike a balance between the environment, economy and society

T

tCO2e - Tonnes of carbon dioxide emission

Telehealth - Telehealth is the distribution of health-related services and information via electronic information and telecommunication technologies

U

UCSD - University of California, San Diego

ULEV - An ultra-low-emission vehicle is a motor vehicle that emits extremely low levels of motor vehicle emissions compared to other vehicles

Z

ZERRO - Zero emission rapid response operations ambulance

0-9

3Rs - Reduce, reuse, recycle

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