



Lincolnshire Integrated Care Board



Lincolnshire System Greener NHS Plan

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Foreword

Climate change and its effects on the environment, and the health and wellbeing of the population is now recognised on a global scale.

Lincolnshire is not immune to the health harms and impacts of climate change. As a coastal county, some areas of our region are under serious threat of flooding from future rising sea levels, making this issue even closer to home.

Responsibility for tackling climate change and reducing carbon emissions cannot be achieved by government or governing bodies alone; everyone needs to play their part and contribute, no matter how small the contribution.

Across the NHS in Lincolnshire and with our County and District Council partners, we are steadfast in our resolve to really make a difference and achieve our collective net zero carbon targets and ambitions.

On 1 July 2022, the NHS became the first health system to embed net zero into legislation. We are working together and recognise the benefits and opportunities that a Greener NHS can have on health inequalities, improving social value and our roles as anchor partners. We have adopted the Lincolnshire County Council three guiding principles:

- Don't waste anything
- Consider wider opportunities
- Take responsibility and pride

The key messages for us all are Reduce wastage, Reuse wherever possible, and Recycle as much as we can. These are things that we can all do and contribute to individually and collectively. Ideas and suggestions from our staff across the NHS and partners will always be welcomed.

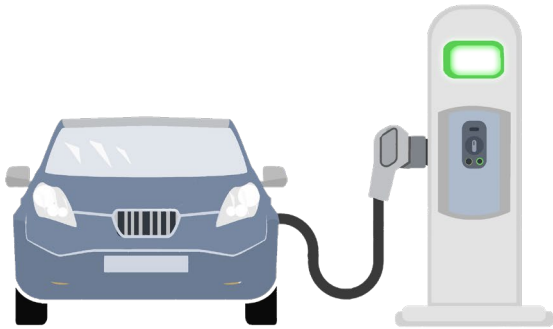
With the energy and commitment of all departments and individual members of staff within the System, we will endeavour to look at every aspect of our business and the services we provide, taking a holistic approach to reducing every aspect of our environmental footprint, whilst working hard towards to provide sustainable high-quality services for the present and future generations.

Lincolnshire is fully committed to playing our part in tackling climate change, not only to benefit the environment globally, but also to contribute to, promote and support the health and wellbeing of the community we serve.

- John Turner, Chief Executive of NHS Lincolnshire
Integrated Care Board



Highlights



LPFT have installed **24 electric vehicle charging points** across five sites.

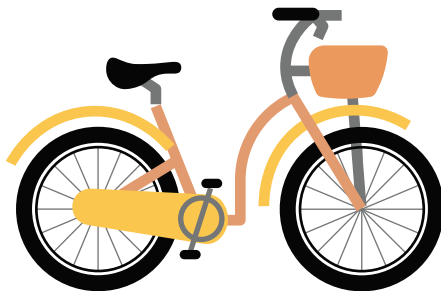
ULHT has received a **commendation from the Carbon Trust.**



ULHT, LCHS and LPFT work in partnership with Stagecoach to provide **discounted bus travel.**



LCHS and LPFT offer salary sacrifice **cycle to work schemes.**



LCHS has delivered **17% of all community contacts through digital means.**



Introduction

In 2020, the former NHS Chief Executive Sir Simon Stevens said;

“While the NHS is already a world leader in sustainability, as the biggest employer in this country and comprising nearly a tenth of the UK economy, we’re both part of the problem and part of the solution.

That’s why we are mobilising our 1.3 million staff to take action for a greener NHS, and it’s why we have worked with the world’s leading experts to help set a practical, evidence-based and ambitious route map and date for the NHS to reach net zero.”

These sentiments have been echoed by his successor, Amanda Pritchard;

“Because we are the NHS, we already have a world-leading drive to reach Net Zero by 2045, leveraging the ingenuity of our colleagues locally, binding in supply chains, and securing hundreds of millions of pounds of capital to support local energy reduction plans. Continuing this incredible progress is a ‘must do’ if we want a resilient health service for the future.”

NHS Lincolnshire is proud to share our Green Plan that seeks to embed sustainability and low carbon practice in the way that the system delivers vital healthcare services.

The Lincolnshire System Greener NHS Plan allows us to set out our current position in addition to our goals for the next three years, with a view to helping the NHS to become the first health service in the world with net zero greenhouse gas (GHG) emissions.

The climate crisis is also a health crisis, as rising temperatures and extreme weather will disrupt care and impact the health of our communities.

As health and the environment are inextricably linked, climate action is not about sacrificing the quality of our patient care. Instead, it is about building new norms and establishing a green thread throughout our activity.

This plan outlines how we will reduce our environmental impact whilst improving health outcomes across Lincolnshire. The system is best-placed to achieve this, as the wellbeing of the populations that we serve is tied to the existence of our anchor organisations. This plan can achieve this twofold task, as many of the actions needed to reduce our carbon footprint have additional benefits for health.

For example, the reduction of air pollution can decrease incidence of COPD. By reducing our system carbon footprint, we can improve the environment at the regional scale and therefore extend these additional health benefits across Lincolnshire.

There are three Trusts within NHS Lincolnshire:

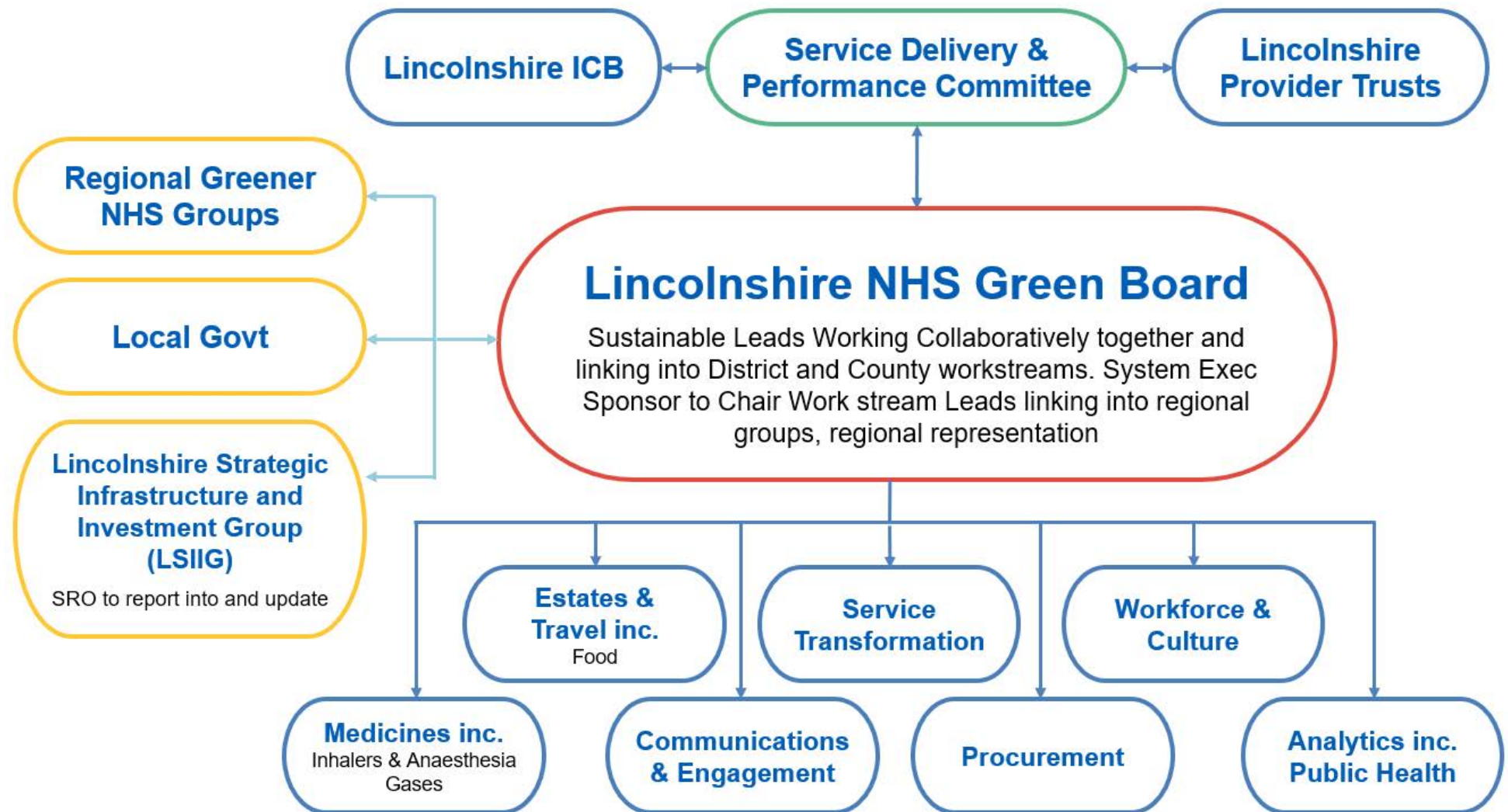
- Lincolnshire Community Health Services NHS Trust (LCHS)
- Lincolnshire Partnership NHS Foundation Trust (LPFT)
- United Lincolnshire Hospitals NHS Trust (ULHT).

Primary care is linked into our Green Plan through the Primary Care Networks and the Primary Network Alliance through the Integrated Care Board.

In this document we will summarise the Green Plans of our member organisations and contextualise them within the wider system.

Delivery of the Green Plan will be overseen by the Integrated Care Board (ICB), monitored by the workstream Green Leads, and reviewed internally on an annual basis.

NHS Lincolnshire Organogram



System Overview

There is a GP-registered population of approximately 800,645 people across the system. Lincolnshire is the fourth largest county in England with a diverse and growing population. It has more than 30 towns, including the main towns: Boston, Bourne, Gainsborough, Grantham, Holbeach, Lincoln, Louth, Skegness, Spalding, Stamford and several hundred parishes.

The Integrated Care Board is co-terminus with one upper tier local authority and there are seven district councils. In August 2021, East Lindsey, Boston Borough Council and South Holland District Council partnered in the South & East Lincolnshire Councils Partnership, allowing the sharing of expertise, teams and resources.

Lincolnshire County Council is the main local authority, which has committed to become carbon neutral by 2050. Their Green Masterplan was launched in 2020. The council has also set an additional goal to reduce emissions by 68% by 2025 from a 1990 baseline. This aspirational target sets out a reduction for 5 years earlier than the government target of 2030. This level of ambition has laid the foundations for our net zero ambitions. A considerable aspect of Lincolnshire's carbon footprint is our health services, as overseen by our system.

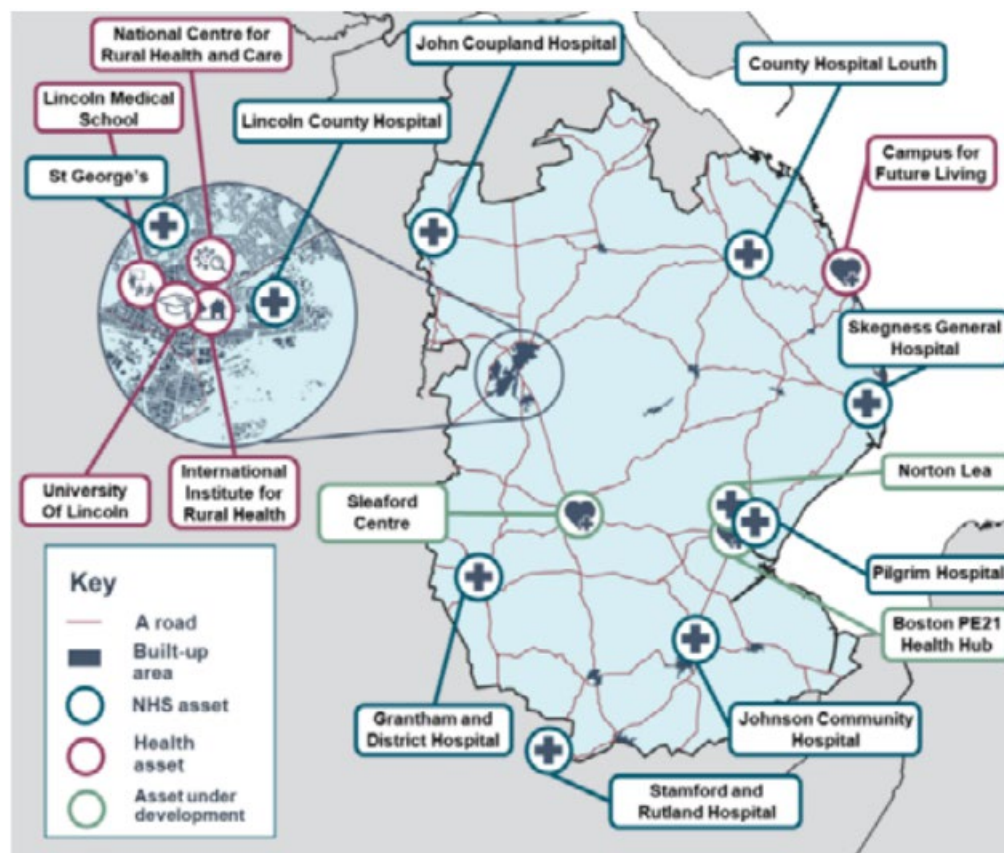


Figure 1: NHS Buildings across the system and how they are linked. Taken from *Lincolnshire – Healthcare, the NHS and the local economy*.

Partner organisations

NHS Lincolnshire binds our partner organisations together with common purpose to improve the health of our population. Our Integrated Care Board (ICB) works with our Integrated Care Partnership (ICP), which has been formed jointly with Local Authority Partners. Together the ICB and ICP form the ICS.

Healthwatch Lincolnshire is the independent consumer champion for health and social care in Lincolnshire as part of the ICB. The Health and Wellbeing Board (HWB), which brings together key leaders from the NHS, Public Health and social care systems, also takes part in this work. Members of the HWB collaborate to agree priorities based on what local communities need. The HWB has a duty to encourage integrated working, including commissioners working in a joined-up manner.

The Lincolnshire Voluntary Engagement Team (VET) is a collective of Voluntary, Community and Social Enterprise (VCSE) organisations working together with a specific focus on developing and delivering health, care, and wellbeing services in Lincolnshire working with partner agencies.

Voluntary Centre Services (VCS) supports volunteers, voluntary and community organisations across Lincolnshire and works to ensure that the voluntary and third sector are informed about local health service and involved in any key decisions that we make about the services commissioned across the system.

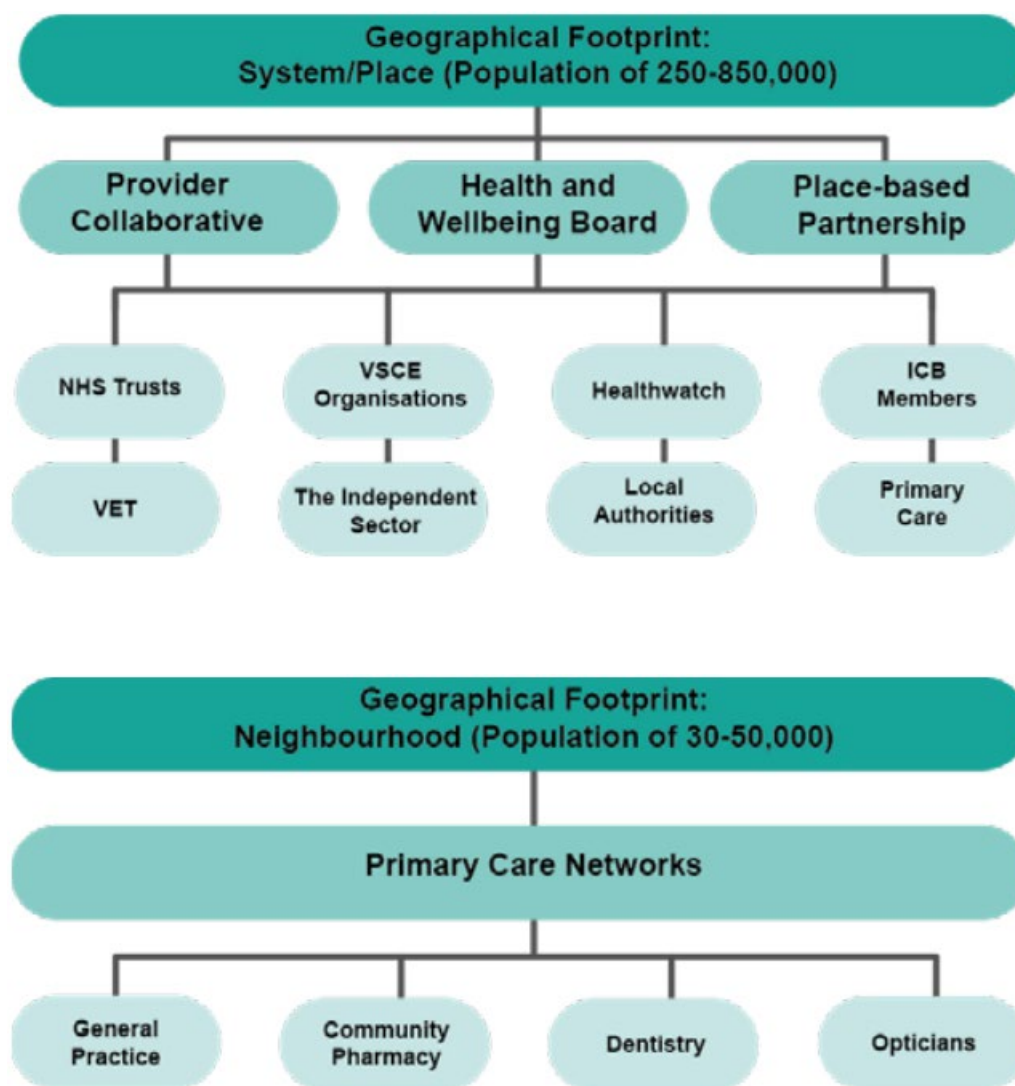


Figure 2: The NHS Lincolnshire structure broken down into place and neighbourhood.

Primary Care Networks (PCNs) are groups of GP practices working together with other local organisations, such as community, mental health, social care, pharmacy, hospital and voluntary services. GP practices across Lincolnshire have been working together for several years through federations, networks, clusters and partnerships.

The NHS Long Term Plan and the new five-year framework for the GP contract have formalised this. In practice, PCNs will build on the work already undertaken and the current services offered by a GP practice. In Lincolnshire, there are 15 PCNs that provide total coverage across the region.

The Greater Lincolnshire Local Enterprise Partnership (LEP) aims to drive economic growth within the region, collaborating with private and public sector leaders. Members of the ICB sit on the Energy Board, representing the perspective of the NHS around clean energy and innovation.

Our Public Health colleagues based within Lincolnshire County Council form part of the system and as a result, the Joint Strategic Needs Assessment, Joint Health and Wellbeing Strategy and social prescribing have been worked on collaboratively.

Other partner organisations include the Lincolnshire Care Homes Association, East Midlands Ambulance Service, the private sector, third sector, and health and social care partners within and outside the footprint.

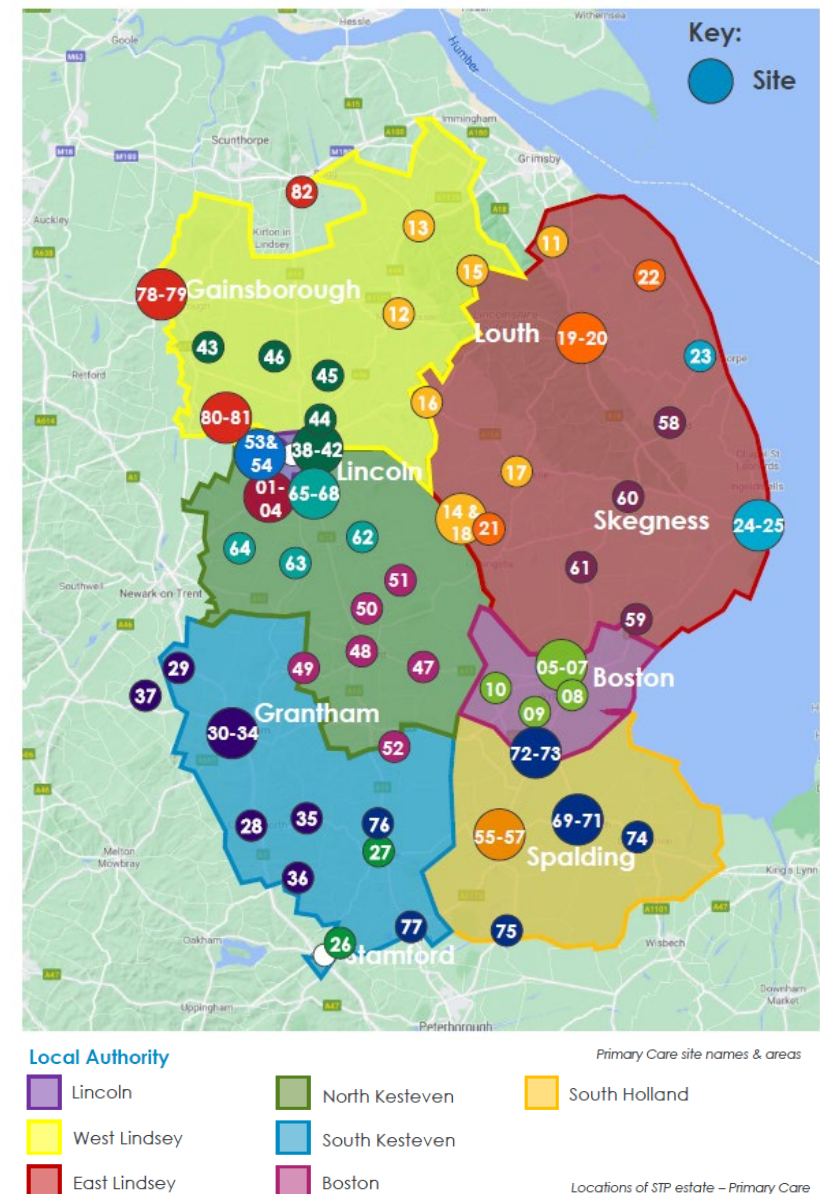


Figure 3: Map showing the locations of our Primary Care Networks.

NHS Greener Reporting and Assurance

The delivery of Net Zero will be supported by initiatives and working groups at the national, regional and System level. This often includes direct arrangements with individual Trusts, held accountable by the

National Sustainability Board and Regional Green Board.

The Green Agenda will connect our organisation across Trusts and Primary Care, linking to Sustainability Managers across Districts and County Council to maximise opportunities. Collaborative working is important, particularly surrounding communications, staff engagement and training.

Regional priorities

As NHS Lincolnshire sits within the Midlands Regional NHS, our Memorandum of Understanding and ongoing Net Zero goals reflect our regional and national priorities. We consequently submit regular highlight reports per the regional priority areas to the regional team. The activities covered by Regional Delivery Plans and the Regional Working Group are ascertained through the National Sustainability Board and reported into the Regional Green Board. Risks and issues managed at a regional level will be escalated to the National Team. The bi-monthly Regional Greener Board meetings that focus on regional delivery, risks and issues.

System priorities

The Midlands Greener team attend our Lincolnshire Green Board. They provide regional and national updates and allow for a route of escalation to assure Net Zero delivery at the System level. System Delivery Plans and System working group activities are assured through the Lincolnshire Green Board and reported to the Regional Green Board. Quarterly system meetings will also focus on system-specific delivery, risks and issues. Risks and Issues will be managed at the System level and when appropriate, will be escalated to the regional Team.

Trust priorities

Trust Delivery Plans are governed by Trust Boards and reported into System Green Board. Risks and Issues managed at Trust Level are escalated to the System. Internal organisational workstreams are governed with executive lead responsibility with an internal reporting procedure.

System Vision

Our Trusts have made considerable progress in their net zero journeys over the years. The challenge now is to set a long-term vision for sustainability within the System and define the actions that the System and our stakeholders will take to achieve it.

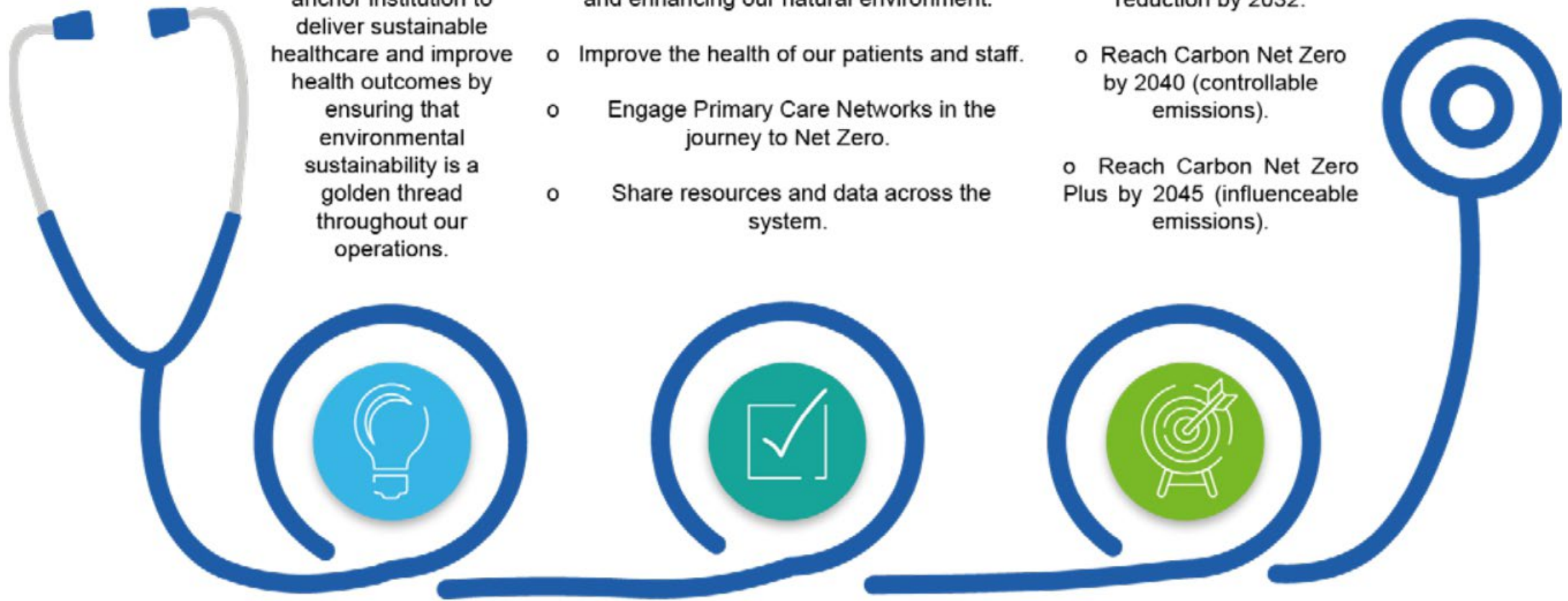
The end goal of the NHS Green Plans is to reach net zero by 2045. This plan will take us through the next three years. As the System develops and matures as an organisation, it will be possible to further develop our longer-term strategy and vision to get to 2045.

The pace of change within the system is beginning steadily, as there is new architecture around healthcare in Lincolnshire. However, as our relationships with stakeholders grow and develop, environmental progress is thought to increase exponentially. This will also allow conversations around budgets funding to develop further. Some financial saving will be feasible by choosing a more sustainable approach, but in many cases, investment will be needed too. Funding should therefore be of focus in the delivery of this Green Plan.

The net zero journey will require changes to infrastructure, policies, practices, behaviours, values and the alignments of activities with the green agenda. Therefore, it is important that a green thread persists throughout all our workstreams. Each area of focus details the actions NHS Lincolnshire will take to reach net zero within that workstream. The actions also need to ensure that the Green Plan will be rooted in the 'place' rather than the 'provider', meaning that it will bring broader Lincolnshire focus.

Below we have detailed our vision, objectives and targets that will be used to enact far reaching and impactful change on the environment and improved health outcomes.





Drivers for Change

International Policy Drivers	Relevance to Green Plan
Intergovernmental Panel on Climate Change (IPCC) AR5 2013	Sets out the 'Net Zero National Health Service 2020' strategy and the 'Greener NHS' guidance
UN Sustainable Development Goals (SDGs) 2016	Sets out the 'Five Year Forward View 2014' strategy
World Health Organisation (WHO) toward environmentally sustainable health systems 2016	Sets out the 'Sustainable Development Strategy for the Health and Social Care System 2014-2020'
World Health Organisation (WHO) Health 2020	Sets out the 'Adaptation Report for the Healthcare System 2015'
The Global Climate and Health Alliance. Mitigation and Co-benefits of Climate Change	Sets out 'The Carter Review 2016'
	Sets out the National Institute for Clinical Excellence (NICE)'s 'Physical Activity; walking and cycling 2012' strategy
	Sets out the 'Health Technical Memoranda' and 'Health Building Notes'
	Sets out the 'Sustainable Transformation Partnership' plans
National Policy Drivers	Relevance to Green Plan
Climate Change Act 2008 (Amended 2015)	Sets out emissions reduction targets
HM Treasury's Sustainability Reporting Framework	Sets out sustainability targets
Public Health Outcomes Framework	Sets out health & wellbeing targets
Integration and Innovation: Working together to improve health and social care for all	Sets out legislative proposals for the subsequently approved Health and Care Bill 2021
Health and Care Bill 2021	Sets out Integrated Care Systems as statutory bodies
Health and Care Act 2022	Places duties on NHS England and all Trusts, Foundation Trusts, and Integrated Care Boards to contribute towards statutory emissions and environmental targets and address net zero emissions targets.

Regional Policy Drivers	Relevance to Green Plan
Lincolnshire County Council Green Masterplan	Lincolnshire's plan to reduce greenhouse gas emissions.
Lincolnshire County Council Carbon Management Plan 2018-2023	Lincolnshire's plan to reduce greenhouse gas emissions.
Lincolnshire Local Transport Plan 2013/14-22/23	Lincolnshire's plan to improve access to transport.
Lincolnshire Council Corporate Environmental Policy	Lincolnshire's ten principles for environmental policy.
Lincoln Climate Commission	The Lincoln section of the Place-Based Climate Action Network.
Joint Lincolnshire Flood Risk and Water Management Strategy 2019-2050	Climate change adaptation: impact of climate change on flood and drought risk.
Lincolnshire County Council Strategy for Waterways Development	Environment, flood risk management and water security.
Greater Lincolnshire Nature Partnership	Actions to conserve and enhance the geological heritage of Greater Lincolnshire.
Lincolnshire Food Partnership	Promotes greener, healthier food across the region.
Lincolnshire HWB Joint Health and Wellbeing Strategy 2018	Plan to reduce health inequalities and improve overall health.
Lincolnshire People Plan 2021-2022	ICS plan for staff and patients.
Better Lives Lincolnshire Alliance: Digital, Data and Technology Strategy and Governance	Joint digital strategy for Lincolnshire Digital and Lincolnshire County Council.
Joint Working Executive Group: Health Inequalities Programme	Detailing health inequalities in Lincolnshire and some methods for tackling them.

Table 1: International, national and regional policy drivers and how they relate to the Green Plan.

The United Nations Sustainable Development Goals

NHS Lincolnshire is working meaningfully towards the United Nations (UN) Sustainable Development Goals (SDGs) through our Green Plan, which we have aligned to relevant SDG targets.

The SDGs underpin a global action framework to 2030, adopted by every UN member country to address the biggest challenges facing humanity.

Each goal has targets and indicators to help nations and organisations prioritise and manage responses to key social, economic and environmental issues. We have considered how the System can contribute to the SDGs as a whole, as well as how sustainability objectives contribute towards the delivery of this strategy.

The NHS and its people contribute to multiple SDGs through the delivery of its core functions, for example, target 3.8, to achieve universal health coverage. Established on 5th July 1948, the UK's National Health Service is the world's first modern fully universal healthcare system, free at the point of use, and celebrating its 75th year in 2023.



Figure 3: The Sustainable Development Goals (SDGs).

Linking the Green Plan to NHS Net Zero

The Net Zero journey will require changes to infrastructure, policies, practices, behaviours, values and alignment of other activities with the green agenda.

Contributing to around 4% of the country's carbon emissions, and over 7% of the economy, the NHS has an essential role to play in meeting the net zero targets set under the Climate Change Act.

Two clear and feasible net zero targets for NHS England are outlined in the [‘Delivering a ‘Net Zero’ National Health Service’ report](#) (aka NHS Net Zero Report):

- **The NHS Carbon Footprint** for the emissions under direct control, net zero by 2040.
- **The NHS Carbon Footprint ‘Plus’** for the emissions under influence, net zero by 2045.

Integrated Care Systems are to align their Green Plans with NHS England's net zero ambitions. The emissions used in this Plan have been calculated from all the sources listed in the NHS Net Zero Report and should be reduced by approximately 4% year-on-year (akin to Science Based Targets) until each of the relevant target dates.

Greenhouse Gas Emissions

Greenhouse gas emissions are conventionally classified into one of three ‘scopes’, dependent on what the emission source is and the level of control an organisation has over the emission source. They are reported in ‘tonnes of carbon dioxide equivalent’ (tCO₂e).

The emission sources and their ‘scopes’ are shown in the infographic.

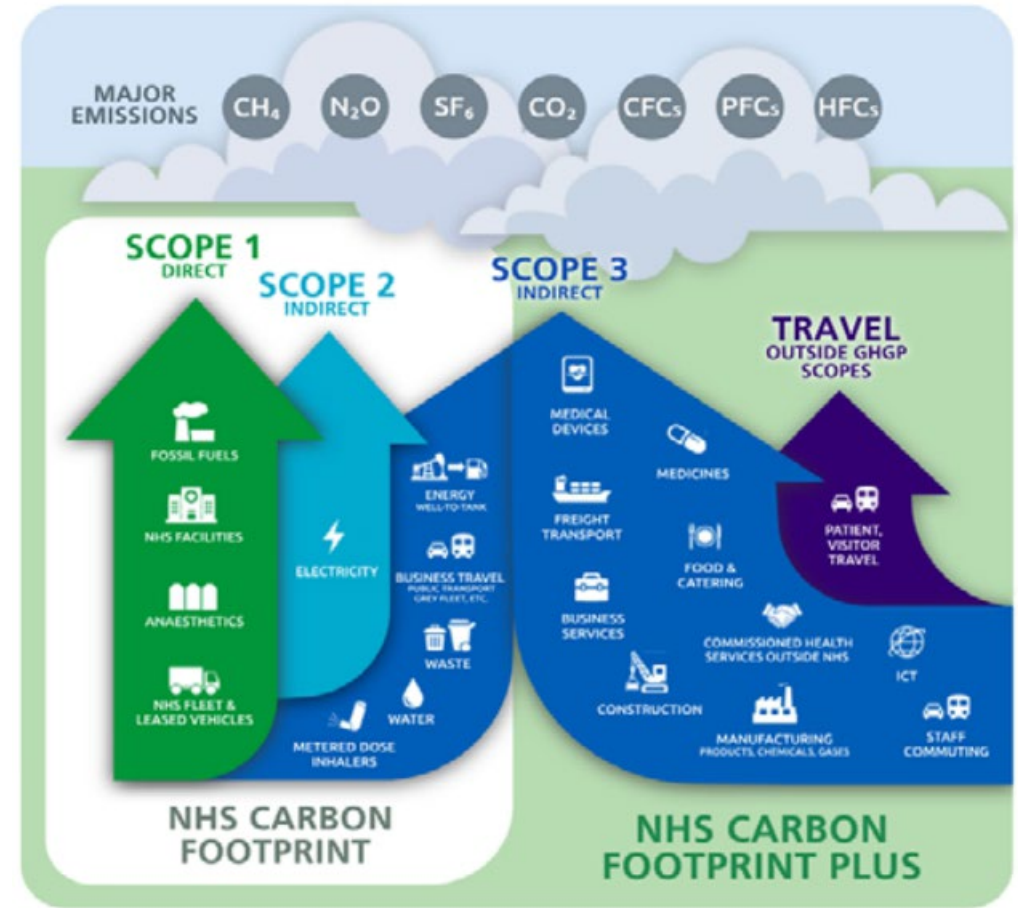


Figure 4: Greenhouse gas emission sources, and their 'scopes'

Data and Methodology

Carbon footprint

Energy and carbon footprint data for financial year 2019/20 were sourced from each individual NHS Trust and CCG, which was a statutory organisation at the time. These data were analysed in a carbon footprint report commissioned in 2021, that used primary data (utility bills, waste report data and fuel card data) and secondary data (mileage expense claims and business travel receipts) to produce a carbon footprint for the System, comprising of the CCG, LCHS, LPFT and ULHT.

Energy, travel, waste and carbon data from this report was further scrutinised for completeness in alignment with the GHG Protocol for Corporate Reporting and with the ISO 14064:1 methodology, and to ensure the correct carbon emission factors had been used (for the correct year, energy type etc.).

Emissions have been apportioned according to their scope (1, 2 or 3, as described in the previous section).

Anomalies were addressed and rectified. Scope 3 well-to-tank (WTT) factors have been used in some emission calculations for energy and travel.

The consolidated carbon footprint does not include information or emissions relating to medicines (volatile anaesthetic agents or inhalers), commuting, patient and visitor travel, and supply chain and procurement emissions. This is due to a lack of methodologies to enable Trusts to collate or report this information during the baseline year. However, future carbon footprints will include this data, as per more recent guidance.

One of our Trusts did calculate the above emissions, though the results are excluded from the consolidate carbon footprint to avoid skewing of data.

Financial year 2019/20 is used as the baseline for this Green Plan. It is hoped that as data collection and reporting methods evolve, we will incorporate medicine, procurement, and additional travel data into our footprint. At this stage, we may change the footprint year and readjust targets accordingly.



Regional and policy drivers

Integrated Care Systems span a variety of geographies and political boundaries. To understand regional and local issues pertaining to sustainable models of care, climate change and other environmental issues, an analysis of regional and local socio-environmental data and local authority policies/strategies was undertaken ('policy scan').

The policy scan has been used to inform the Green Plan narrative and action plans.

The [SHAPE Atlas tool](#) and other [governmental datasets](#) were used to provide additional information or detail to the policy scan.

Maturity Matrix

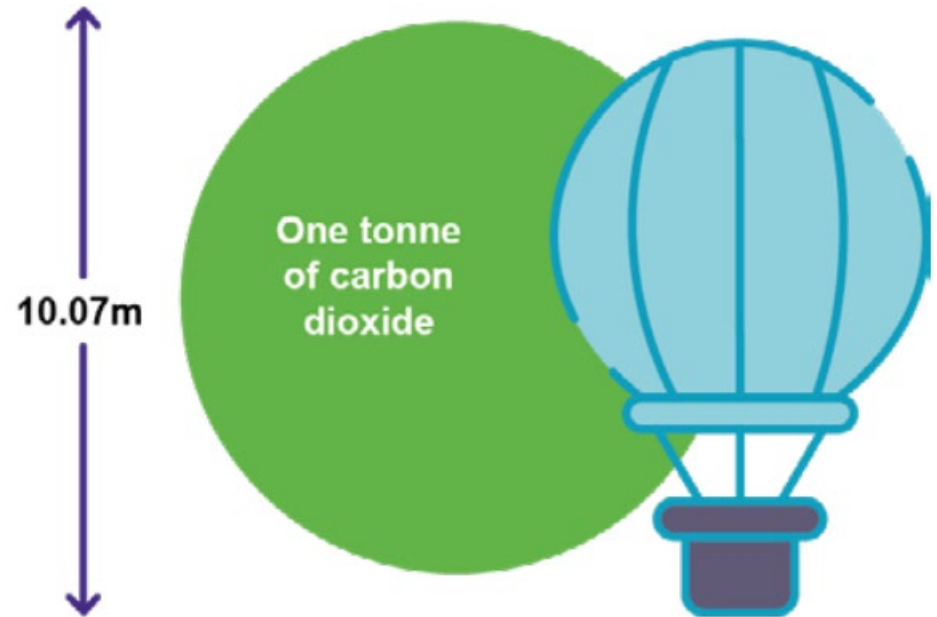
Each Trust's Green Plan has been assessed in terms of alignment with the NHS' ['How to produce a Green Plan'](#) guidance and the robustness of Trust's action plans.

The assessment and scoring used the metrics as follows:

- Data completeness and presentation
- Existing strategies and narrative
- Future targeting

A radar graph for each Trust has been produced and amalgamated into a radar graph to show the maturity of the Trusts' respective Green Plans.

The weighting for future targets remains equal across all areas of focus, the other two metrics fluctuate depending on how much data is needed in that area.



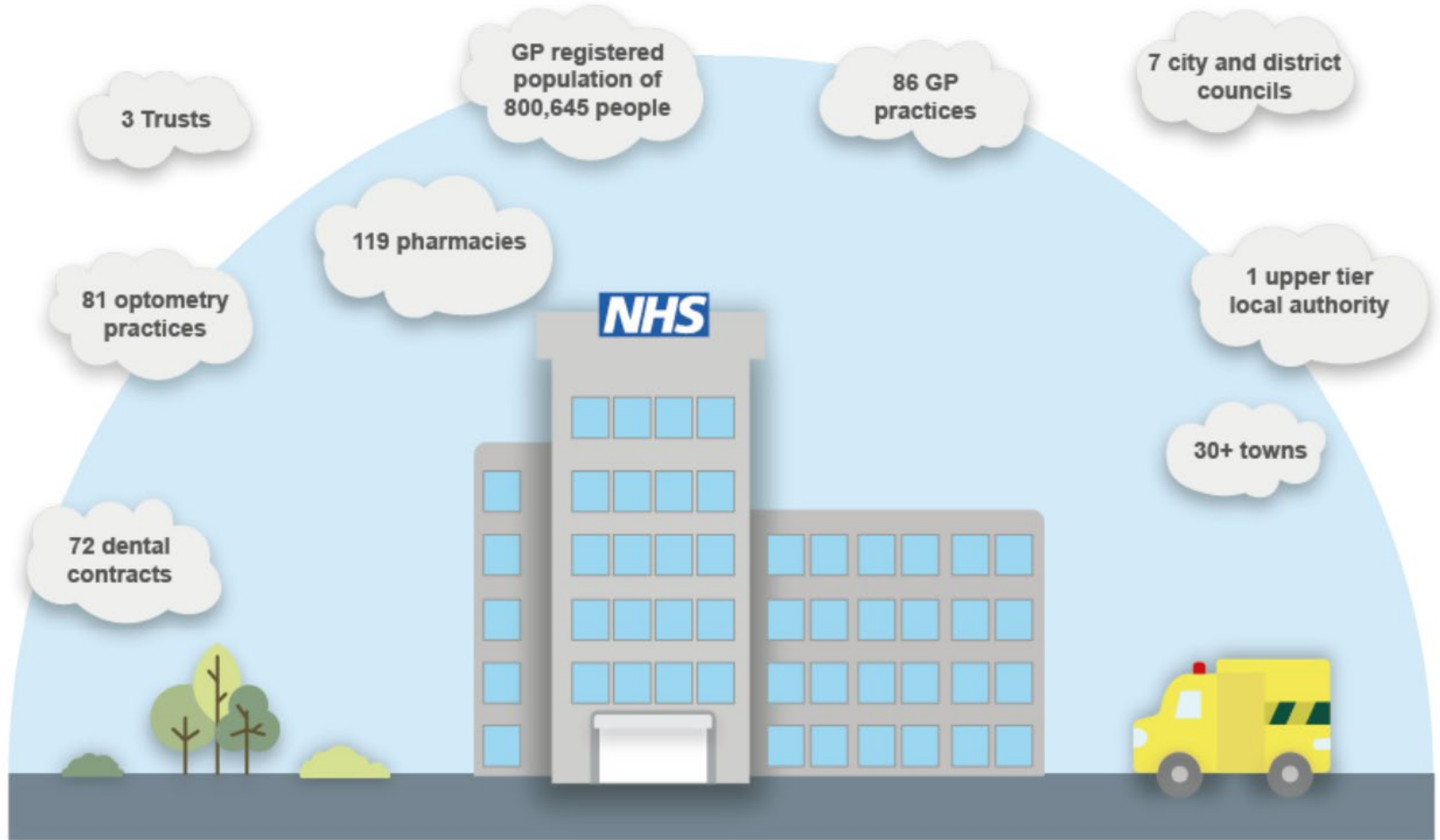
What does 1 tonne of carbon dioxide look like?

One tCO₂e can be visualised as a volume of gas the size of a hot air balloon – a sphere about 10 metres in diameter.

The average 3-bedroom semi-detached home emits around 1 tCO₂e per year from electricity consumption and almost 2 tCO₂e from the use of natural gas for heating and cooking.

Figure 5: Visualisation of a tonne of carbon dioxide.

Current Position



Health inequalities

There are social determinants of health determined by the broad social and economic circumstances into which people are born and live, which treatment alone cannot tackle. Local systems working together with strong leadership, joint planning, ambitions and scale have important roles to play in helping to untangle the complex web leading to health inequalities.

In Lincolnshire, the Indices of Multiple Deprivation (IMD) 2019 show a clear area around the coast with high levels of deprivation compared to the national picture. The local authorities were ranked in alignment with the national picture out of 326 areas (1 is most deprived and 326 is least deprived):

District council	Index of Multiple Deprivation
East Lindsey	30
Lincoln	68
Boston	85
South Holland	144
West Lindsey	146
South Kesteven	234
North Kesteven	268

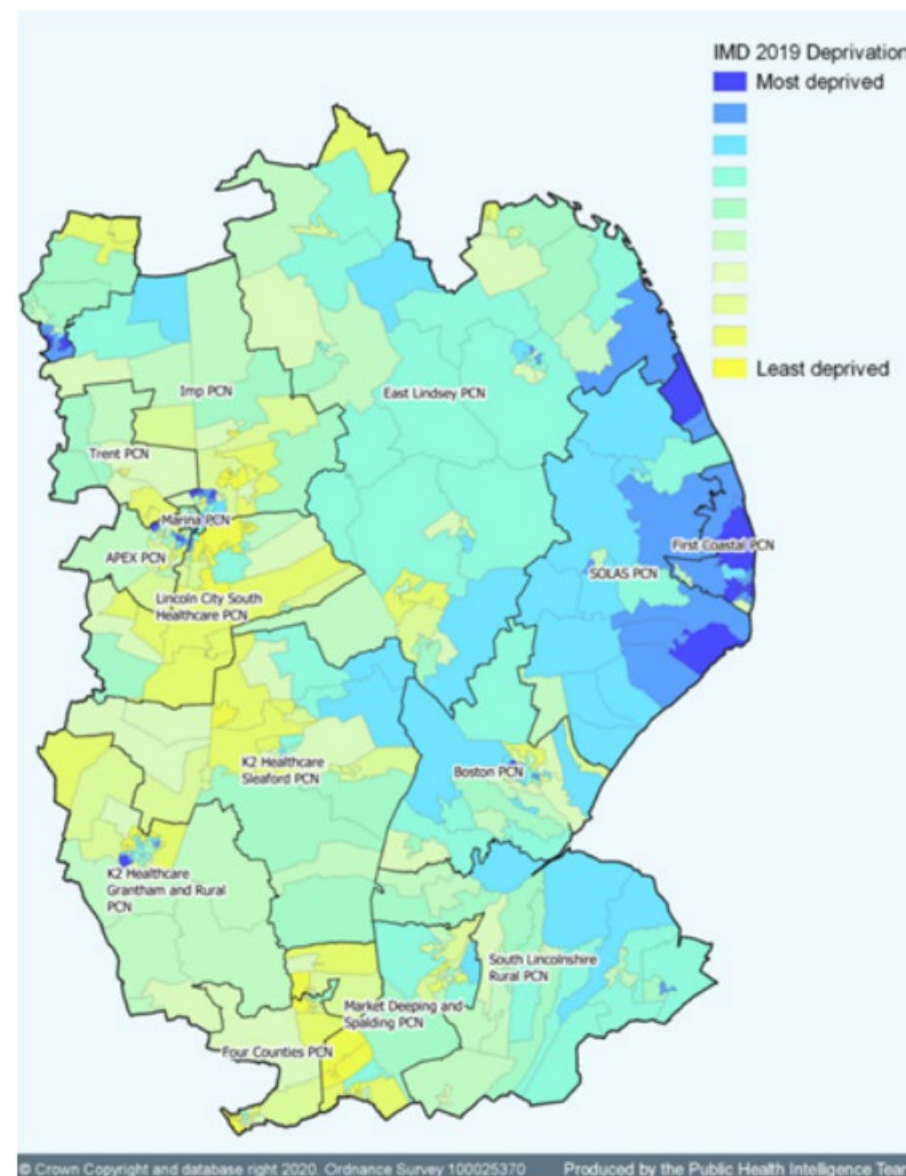


Figure 6: Index of Multiple Deprivation (IMD) across the System, grouped into primary care networks (PCN). Taken from the JWEJ report on Health Inequalities.

The social and economic factors associated with IMD can result in increased occurrences of smoking and obesity. The JWEG Health Inequalities Programme sought to address health inequalities at the system level.

Smoking remains the greatest single contributor to health inequalities, accounting for half of the difference in life expectancy between those living in the most and least deprived communities.

Cardiovascular disease (CVD) and Alzheimers are also strongly associated with health inequalities and where the associated risk factors can be linked to modifiable lifestyle risks, awareness campaigns can be utilised across the system. If successful, these campaigns can reduce hospital admissions and therefore contribute to sustainable care models.

Where the risk factors for health issues are environmental, the actions in the Green Plan could reduce their occurrences across the system. Chronic obstructive pulmonary disease (COPD) is an example of this, as it has been linked not only to smoking, but poor air quality. This demonstrates the crossover between social, economic and environmental factors with health.

The Maturity Matrix below displays how comprehensively each area of focus has been portrayed by each Trust within their Green Plan. While this is a useful guide to highlight areas within each Trust which may benefit from further investigation and improvement, this only reflects how extensively each area has been covered within the Green Plan, not the actual performance of the Trust.



Maturity Matrix

The Maturity Matrix below displays how comprehensively each area of focus has been portrayed by each Trust within their Green Plan. While this is a useful guide to highlight areas within each Trust which may benefit from further investigation and improvement, this only reflects how extensively each area has been covered within the Green Plan, not the actual performance of the Trust.

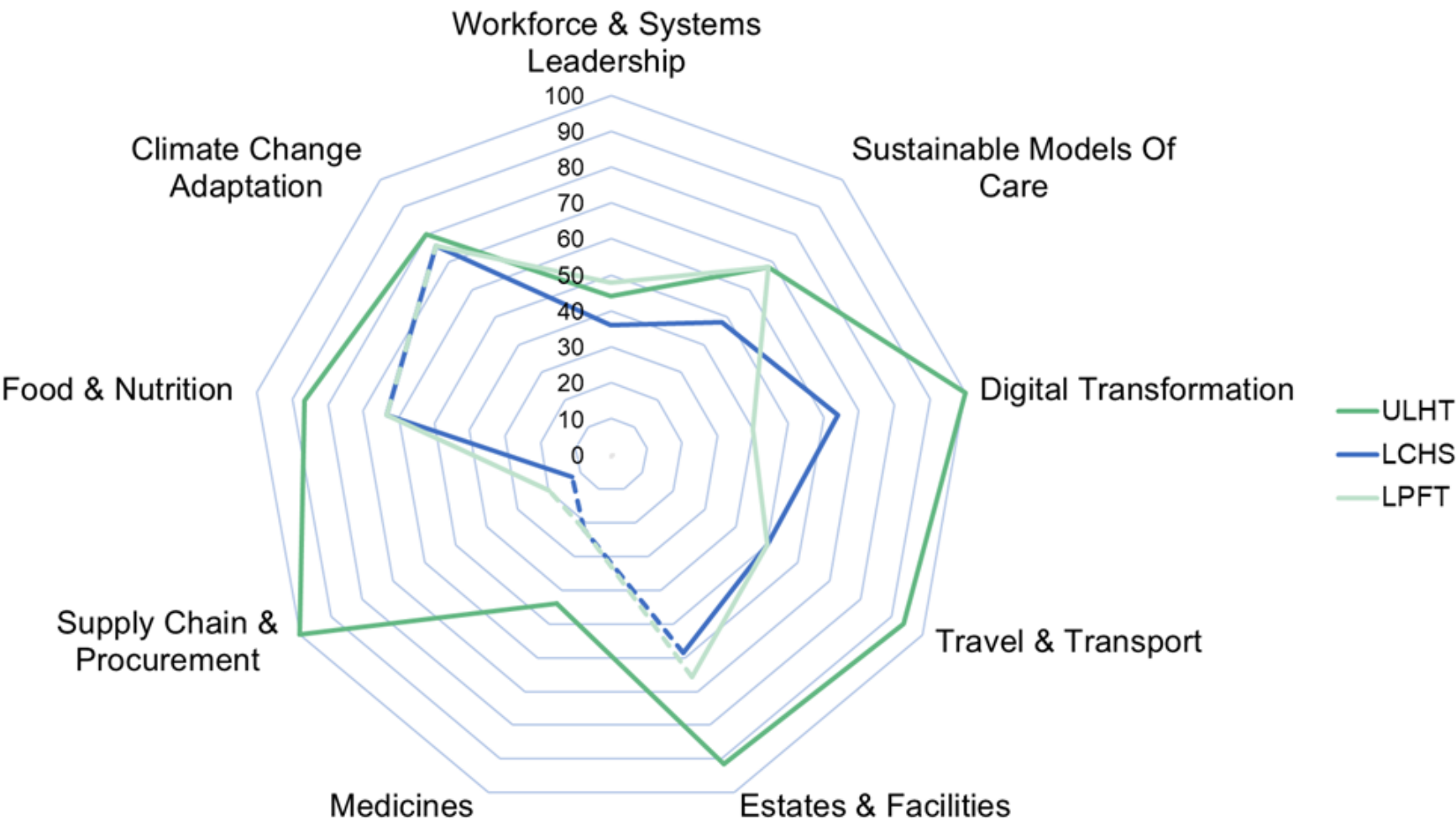


Figure 7: A radar diagram showing how each Trust scored for the completeness of their Green Plan sections.

We can see that all three Trusts showed strengths in different areas within their Green Plans. These differences in where Trusts are already succeeding allows for collaboration and sharing of best practice going forward.

In the area of Workforce and Systems Leadership, LPFT and ULHT scored well as they evidenced how staff are being engaged in sustainable action. Setting specific targets to take forward in this area would have increased the score for LCHS.

For Sustainable Models of Care, LPFT and ULHT both scored well, the former for providing good links to various inequalities that exist across their communities, and the latter for setting out their existing strategies to tackle these inequalities. To improve on how this area is presented in the Green Plan, LCHS could discuss their strategies and how these will address inequalities.

In Digital Transformation, ULHT provide a level of detail and links to existing strategies. Employing a similar level of detail would help to show the readers of LCHS and LPFT's Green Plans what is being done in this area. This presents an opportunity for facilitation at system level for best practice to be shared across the three Trusts.

ULHT scored particularly well in the Travel area of focus as they included travel emissions data across several years in their carbon footprint calculations, allowing them to set out a trajectory for their emissions reductions. LCHS and LPFT's Plans did not present this data, which is reflected in their scores for this section.

While data was present for all three Trusts in Estates and Facilities, LPFT and LCHS could have benefitted further from providing data for the last financial year and linking their Plan back to more of their existing Estates strategies and initiatives.

Procurement presents a good opportunity for shared learning. All three Trusts outlined their existing strategies, as they share a procurement service, and set targets for improvement in this area. ULHT also included emissions data and graphs related to their procurement activity, providing the opportunity to present this data as part of their overall carbon footprint and in an emissions trajectory. LCHS and LPFT could follow this example in order to present the good work that is already being done within their Plans.

For Medicines, the inclusion of inhaler and anaesthetic gas emissions within ULHT's Plan would have improved their score. This area of focus is not applicable to LCHS and LPFT, as they do not administer anaesthetics or provide inhalers to patients.

Under Food and Nutrition, all three Trusts had strong narrative sections. To go the extra mile, LCHS and LPFT could strengthen their targets and objectives by setting deadlines and methods for measuring progress.

For Climate Change Adaptation, every Trust identified climate risks and details of Risk Assessments and Heat Wave Plans, which made for strong sections. However, LPFT and LCHS can strengthen their performance by including target years for their objectives.

Over the next three years, the Trust Plans will continue to develop through collaboration, sharing of best practice, and facilitation through the System. This will allow Trusts to support one another to reach the targets that they have set themselves on their routes to achieving net zero.

NHS Lincolnshire Carbon Footprint: Wheel

The wheel represents the carbon footprint across our System. There are two broad groups that encapsulate these categories: emissions that are under our direct control, and emissions under our influence, as seen in the key for Figure 8.

As mentioned in the methodology section, this carbon footprint data was sourced from a report that excluded these data and therefore the above wheel reflects our emissions sources under direct control of the System. The two categories are therefore delivery of care and personal travel, both falling within our direct control.

Emission sources that are difficult to control include the supply chain and patient and visitor travel (commuting). As mentioned in the methodology section, this carbon footprint data was sourced from a report that excluded these data and therefore the above wheel reflects our emissions sources under our direct control.

46.1% of these emissions came from building operation, 0.9% from anaesthetic gas consumption, 43.1% from staff travel (Commuting), and 9.4% from business travel. In the future we plan to capture emissions from all sources in our carbon footprint to improve on its accuracy and to reach NHS Carbon Footprint 'Plus' by 2045.

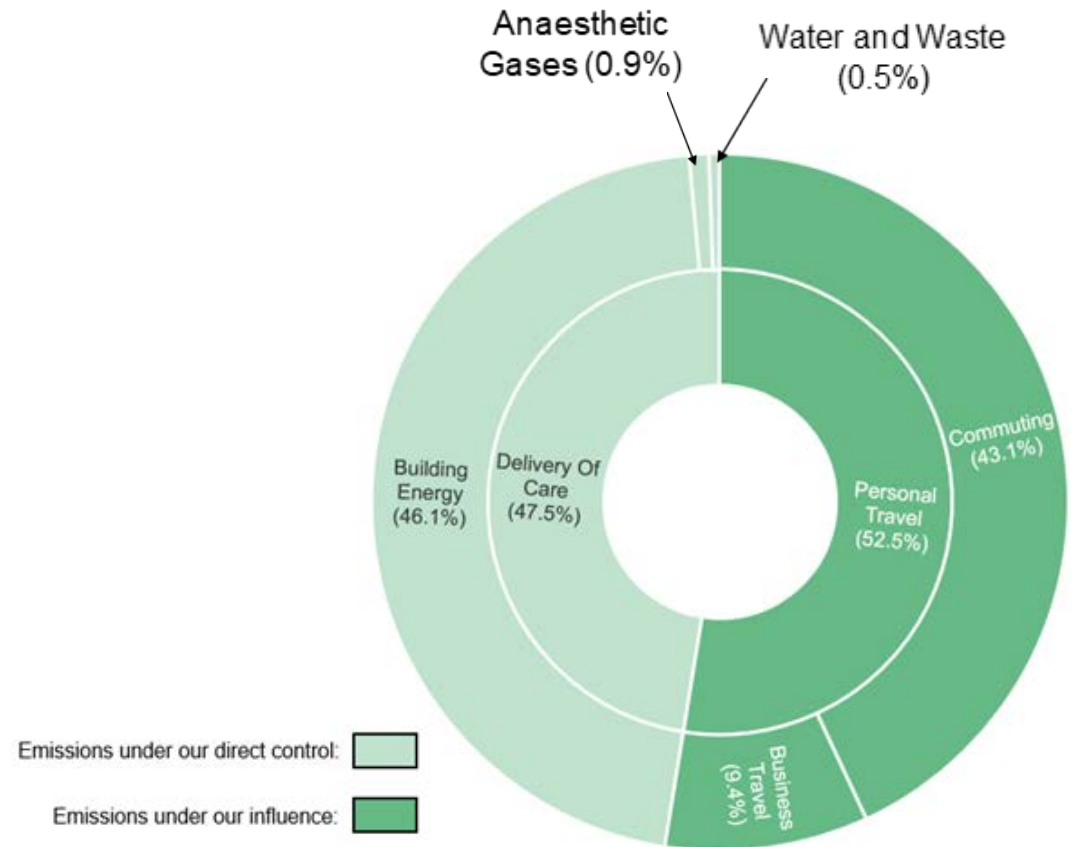


Figure 8: The wheel graphic shows what proportion of each category's emissions make up the total carbon footprint of the System.

Trajectory to 2045

To reach net zero by 2045, each of our member organisations will need to achieve a 4% year on year reduction if they fall into the 'net zero by 2040' category, and a 5% year-on-year reduction if they are in the 'net zero by 2045' category. The trajectory for this in each of the key areas of greenhouse gas emissions can be seen below.

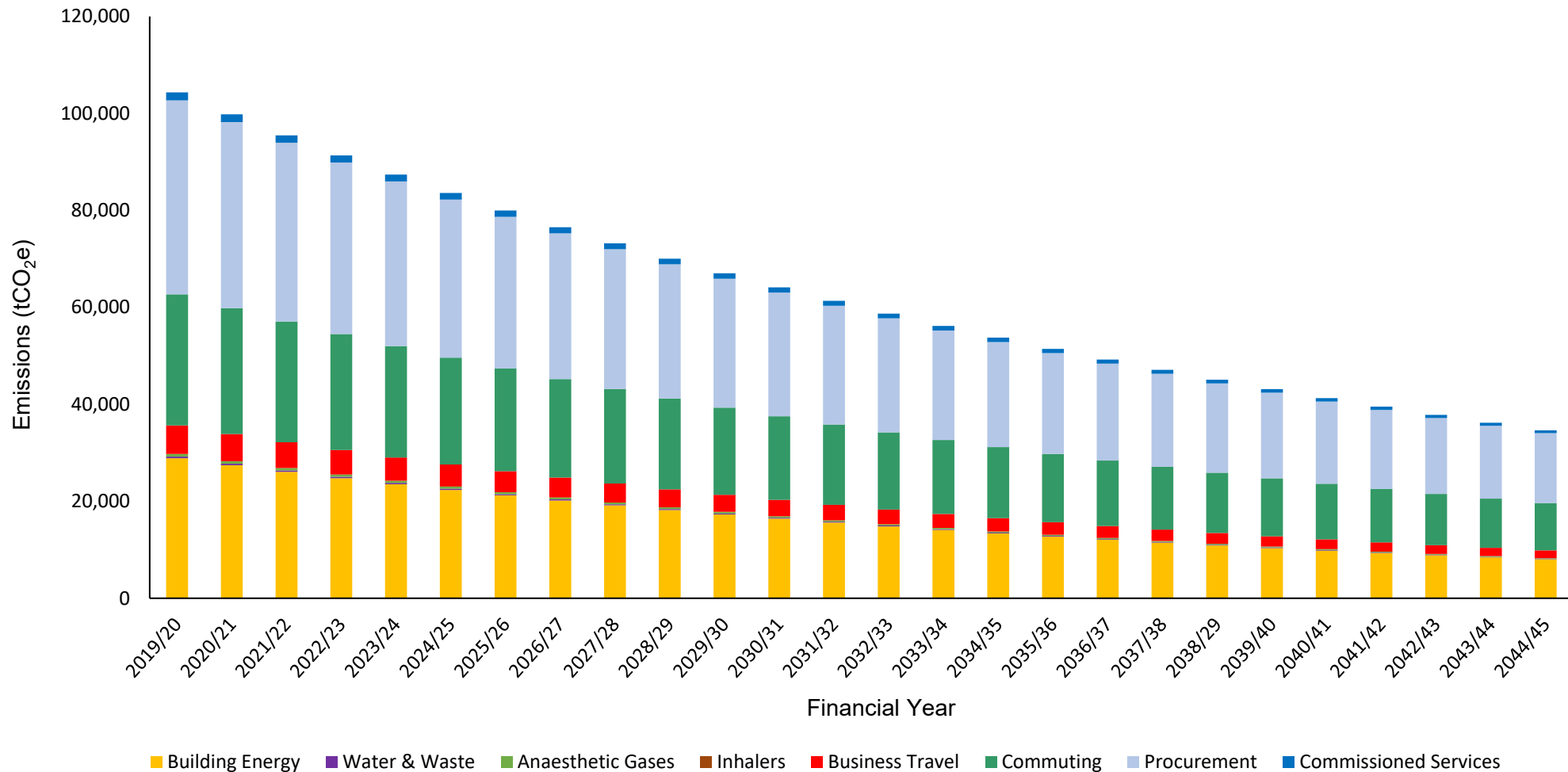


Figure 9: A graph showing the emissions reduction required for each category in order for our System to reach net zero by 2040 for emissions under our direct control and 2045 for emissions that we have influence over.

Areas of Focus Contents

The following 'Areas of Focus' give an overview of our current performance/status across the system.

**Workforce & System
Leadership 27**

**Sustainable Models
of Care 29**

**Digital
Transformation 31**

Travel and Transport 33

**Estates and
Facilities 38**

Medicines 45

**Supply Chain and
Procurement 47**

**Food and
Nutrition 50**

**Climate
Adaptation 51**



Workforce and Systems Leadership

We will build our Green Plan into our strategic planning and governance, including our clinical and operational policies and procedures to ensure sustainable development is a part of our daily work and how we measure success.

Workforce

This is a shared journey, and we invite all our colleagues to be a part of it. To convey to our colleagues why the Green Plan is important, education is crucial, in addition to raising awareness of, and engagement with, net zero goals and sustainable development. A limited number of colleagues are certified to be carbon literate through carbon literacy training, which we plan to encourage across our ICB.

At the Trust level, all three Trusts have ambitions to recruit green champions to increase staff engagement around sustainability. With regards to training, LPFT and LCHS employ a hybrid approach to sustainability training and operate an intranet page. At LPFT, there is environmental training available on the electronic staff record (ESR) and the Trust is looking to further promote this across the workforce.

We will support our partner organisations in maintaining the health and wellbeing of NHS colleagues and taking action to ensure that they can encourage high rates of workforce recruitment and retention. This issue is of particular importance for Lincolnshire. We are working with local Higher Education Institutes to support the training and development of healthcare professionals to support recruitment and retention of a Lincolnshire-based workforce.





Across the system, we have a responsibility to consider all our member organisations in the decisions we make, including primary and secondary care, and how these link to our partner organisations.

The Lincolnshire Sustainability Officers are a cross-partnership group comprising of the District and County Councils and NHS representatives. The group discusses environmental issues and has discussions with various stakeholders such as the council on the changes occurring across the region. We have Trust and system-level representation at these meetings, allowing the System to represent healthcare in these discussions.

Systems Leadership

This Green Plan is approved by our ICB and will be reviewed (and revised if necessary) at least annually to keep us on track with the NHS net zero goals and our own targets. These reviews and our progress against the actions in the Green Plan will be submitted to our Coordinating Commission.

Each of our Trusts have internal structures and processes that allow the green agenda to be embedded systematically. Our other providers may seek to set up similar sustainability groups.

Working as part of a wider system is beneficial, as sustainability is an issue best addressed as a common purpose. Drawing expertise from across primary and secondary care alongside our partner organisations, including the University of Lincoln, will allow us to embed sustainability in everything that we do.

Integrated Care Systems have a pivotal leadership role, with the aim of progressively deepening relationships between the NHS, local authorities, and other social and healthcare organisations. NHS Lincolnshire proactively ensures quality governance arrangements, adhering to the National Quality Board's (NQB) quality commitments and position statement.

We will utilise our anchor institution status to maximise opportunities to collaborate on initiatives to support and deliver our collective Green Plan actions. Our system has considered how sustainability can be embedded across our strategies and plans. This Green Plan has been developed to align with our People Plan and Digital Strategy.

The Place-Based Climate Action Network (PCAN) focus on bringing together people and organisations from across the public, private and civic sectors to drive place-based climate action.

The Lincoln Climate Commission are part of the PCAN, which can be coordinated across Lincolnshire and engage with the integrated care system on common themes. Utilising our role as an anchor institution and partner helps to ensure that climate initiatives are joined-up and amplify the efforts across our region.



Sustainable Models of Care



The NHS Long Term Plan introduced sustainable care into the NHS service model. Sustainable models of care can reduce health inequalities by streamlining care pathways, making them more efficient, and focusing on preventative care. Relevance to the Green Plan comes with the emission reduction that is associated with these effects.

An example of this is our System priority of transforming community and urgent and emergency care to prevent inappropriate attendance at emergency departments (ED) and reducing the length of stay. We are implementing these changes across the System whilst working to ensure that NHS111 is used as the primary route to access urgent care can help to streamline the process.

The National Patient Safety Improvement Programmes and the Investment Impact Fund indicators (IIF) provide underpinning principles for sustainable models of care. Staff training and empowerment are critical to deliver this.

Adhering to the Getting it Right First-Time programme (GIRFT) contributes to this area as it helps to avoid additional hospital bed days and patient and visitor travel to our clinics, and their associated environmental impacts. Strong interagency partnership working within the System enhances the principles of GIRFT.





The National Pathway Improvement Programme and GIRFT will be important in developing accredited plans for the national elective recovery programme. The System will be instrumental in ensuring that the NHS can reach

the targets set in the elective recovery plan, which set out a vision to reduce wait times that have increased due to the COVID-19 pandemic.

Lincolnshire ICS will build on what we have learned during the pandemic to transform the delivery of services, accelerate the restoration of elective and cancer care and manage the increasing demand on mental health services. We also commit to link Greenhouse Gas (GHG) reductions with our delivery of the Long Term Plan sustainable care model.

Community Diagnostic Centres can be used to make our care delivery more sustainable, as they facilitate earlier diagnoses, as well as reduced hospital visits, wait times and patient journeys. One of these centres is operated by ULHT in Grantham away from the main hospital, which opened in April 2022. A second CDC is being planned to open in 2022/23.

At the Trust level, our member organisations have contributed to sustainable care models by supporting flexible working for staff. LPFT managed to achieve 10,000 fewer inpatient bed days per annum compared with 2019/20 through the provision of virtual appointments since COVID-19 made in-person appointments less feasible.

The Trust is also looking to develop mental health crisis cafés and other community-based support services to further develop preventative care. Outside of secondary care, there should be an emphasis on expanding primary care capacity to improve access, local health outcomes and address health inequalities.





Digital Transformation



To fully utilise the potential of digital systems to improve patient outcomes, systems need to:

- Build smart digital and data foundations
- Connect health and care services
- Use digital systems to transform care
- Put citizens at the centre of care

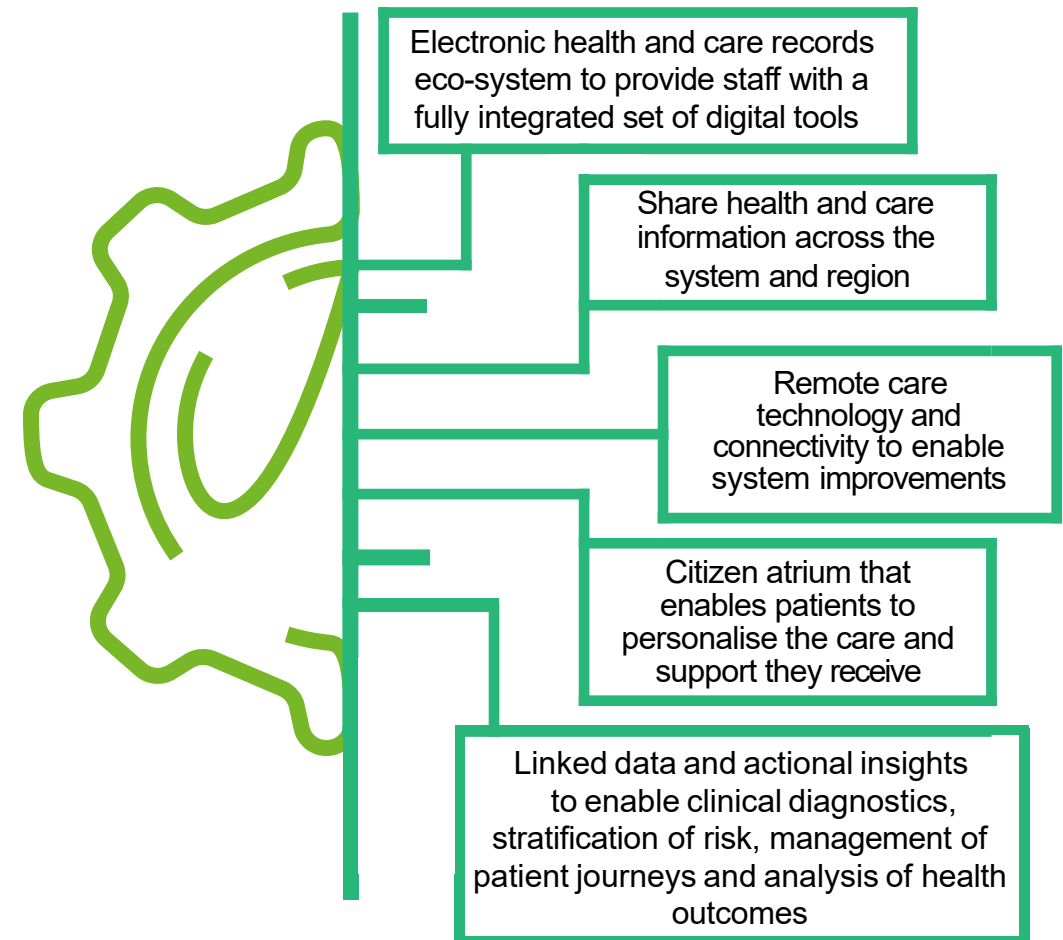
The NHS Long Term Plan commits all NHS bodies to focus on digital transformation by establishing a 'digital front door', enabling patients to be able to engage in 'digital first care'.

The [NHS App](#) is one example of this, providing patients with a simple and secure way to access NHS services on their smartphone.

The NHS Planning Guidance requires that at least 25% of all clinically necessary outpatient appointments should be delivered remotely by telephone or video consultation.

Streamlining and digitising administrative functions reduces paper waste and expedites processes. The Government's Greening ICT and Digital Services Strategy 2020-2025 is also taken into consideration when looking at the improvement of our digital care services.

Our DDaT Strategy (Digital, Data and Technology) sets out our five enabling priorities:





The What Good Looks Like framework describes how arrangements across a whole ICS can support success. There are seven success measures: well-led, ensure smart foundations, safe practice, support people, empower citizens, improve care, and healthy populations.

NHS Lincolnshire is well-placed to lead the development of digital care as a tool to promote inclusion and increase access to quality care in the region and is committed to ensuring that digital services are tailored to meet the needs of our different specific care groups.

Across our member organisations, progress has already been made on embedding digital services across the System. LCHS has delivered 17% of all community contacts through digital means following the introduction of more sustainable care models. The Trust has put a keen emphasis on the use of virtual meetings; this includes internal meetings, patient consultations, and even group exercise classes. Virtual wards are also being implemented at LCHS, which negates travel from patients' visitors and reduces hospital energy consumption, as longer term patients are cared for and monitored in their own homes. The Trust is also paper light and employs an Electronic Patient Record (EPR).

ULHT delivered approximately 40% of outpatient appointments remotely in 2020/21, including 6,429 video consultations and 240,145 telephone consultations.

ULHT's patient correspondence is increasingly automated and sent online and the Trust uses a Community Care Portal linking patient information systems with Lincolnshire provider partners to ensure that data is available to authorises persons and used for direct patient care.





Travel and Transport

The NHS Net Zero plan calculates that reaching UK ambitions on emissions reductions in line with Paris Agreement targets could save 38,000 lives with improved air quality: air quality forms a direct link between climate change and health outcomes.

According to the World Health Organisation (WHO), poor air quality leads to over 7 million deaths globally and that 9 out of 10 people worldwide breathe polluted air.

The Figure visualises the Level of PM10 Particulate Matter as sourced from the Consumer Data Research Centre: Access to Healthy Assets and Hazards (AHAH) (exported from SHAPE Atlas).

Travel is a key contributor to air pollution, and with as many as 1 in 20 road journeys in the UK attributable to the NHS, systematic intervention alongside local authority partners has the potential to have an significant impact both on our communities' air quality and therefore health outcomes.

Despite being a rural region, Lincolnshire displays high levels of PM10. This is a commonly used proxy indicator for air pollution, as it affects people's health to a higher degree than any other pollutant.

The system commits to tackle this issue through investment and engagement with staff, patients and our partner local authorities. We will give special consideration to the air quality across Lincolnshire and aim to mitigate the impacts whilst contributing to a reduction in air pollution across the region.

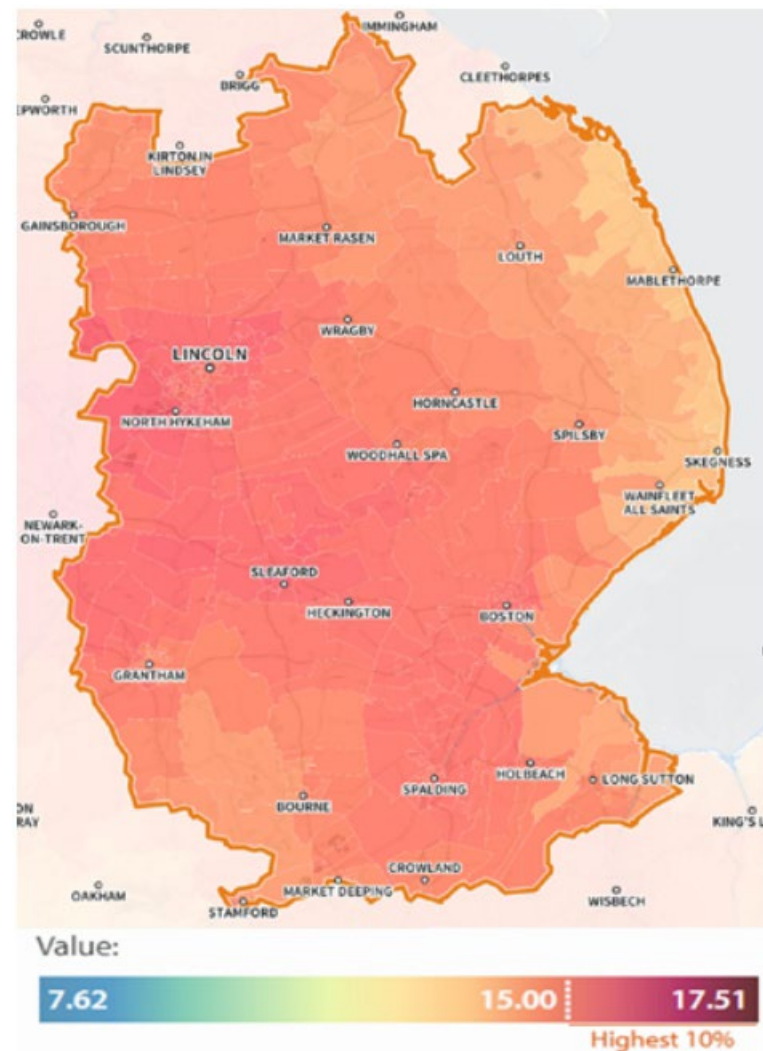


Figure 10: Level of PM10 Particulate Matter as sourced from the Consumer Data Research Centre: Access to Healthy Assets and Hazards (AHAH) (exported from SHAPE Atlas).



Public Transport

Bus and rail travel allow staff, patients and visitors that live far away from our sites to travel in a more sustainable manner. This requires infrastructure, which the System can help to develop through our partnership with Lincolnshire County Council.

Bus infrastructure across the region is disparate. Although our Trusts have formed relationships with Stagecoach, the access to public transport across the region differs based on where you live.

Rail travel is particularly less comprehensive on the east coast. We recognise that the rurality of the county and the lack of a strong public transport network means that there is a greater reliance on car journeys for patients and staff. There are no easy solutions, but we are committed to working with partners on ways to avoid travel, keep care as close to home as possible and to develop transport strategies that support the green agenda across the county.

Key

- Urban major conurbation
- Urban minor conurbation
- Urban city and town
- Urban city and town in a sparse setting
- Rural town and fringe
- Rural town and fringe in a sparse setting
- Rural village and dispersed
- Rural village and dispersed in a sparse setting

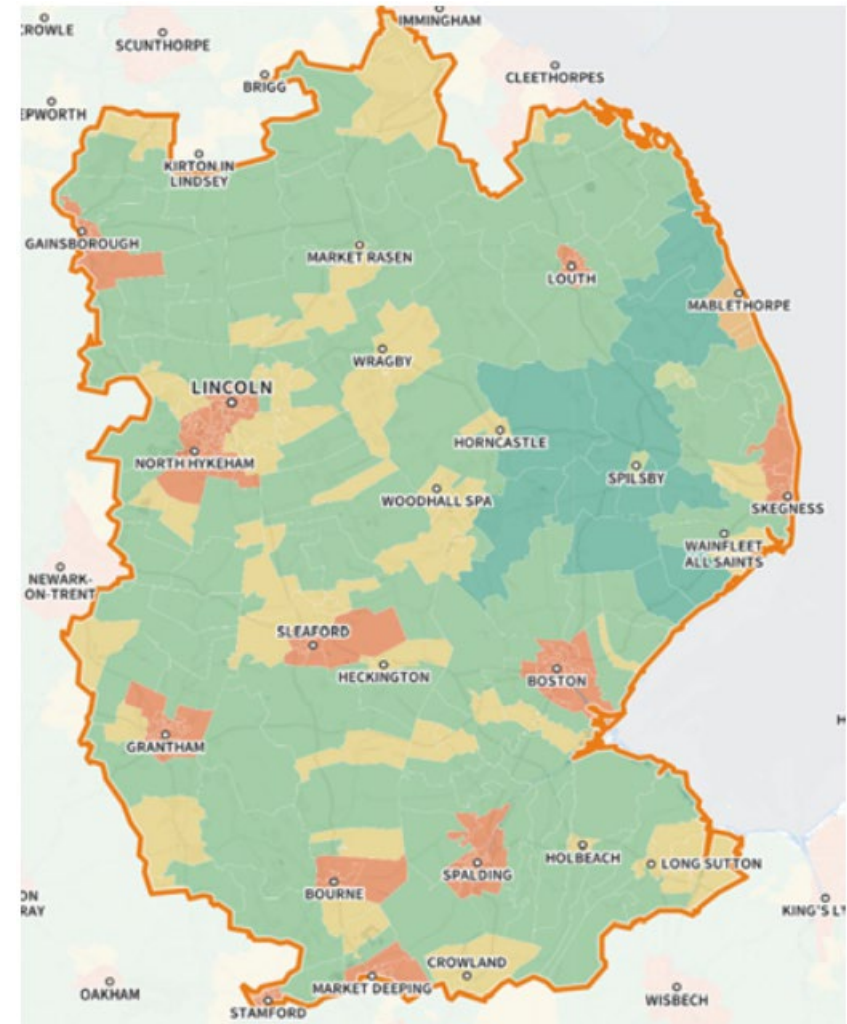


Figure 11: This map visualises the ONS 2011 rural/urban classification (exported from SHAPE Atlas).



Electric Vehicles (EV)

Before making decisions regarding the fleet, NHSEI suggests that Trusts undertake green fleet reviews to identify any petrol/diesel cars that are underutilised

and can be removed from the fleet.

Once this has been done, appropriate transitions can be made to Ultra Low Emission Vehicles (ULEVs) and Zero Emission Vehicles (ZEVs).

Charging infrastructure is a potential barrier to encouraging electric vehicle uptake by patients, visitors, and staff. Although LPFT has 24 charging points across give of its sites, Lincolnshire is a rural region. This means that for some members of the population, EV charging access is disparate.

By partnering with Lincolnshire County Council and other partners, we seek to improve the region's charging infrastructure.





Active Travel

Travel on bikes and on foot produces the fewest carbon emissions in addition to being the lowest cost to the user as a method of transport, making active

travel a key focus for decarbonisation of travel.

There are some barriers to active travel that can be addressed from a system perspective. Cycle lanes and streetlights are important as they ensure that cyclists feel safe on the roads. The rural nature of Lincolnshire can potentially create an issue, which could be addressed through collaboration with Lincolnshire County Council.

The Department for Transport (DfT) has awarded Lincolnshire £799,900 to provide more opportunities to choose walking and cycling for day-to-day journeys, to boost active travel and reduce traffic congestion.

The council has also developed four additional prospective schemes to take forward as part of an additional second round of DfT funding including low-traffic neighbourhoods and active travel zones. Further engagement with this kind of scheme would help to encourage our staff, patients and visitors to travel actively.

At our sites active travel can be supported using several methods. Cycle-to-work salary sacrifice schemes are an example of this. Their uptake can be encouraged through implementation of lockers and showers, and by offering Dr Bike sessions. LCHS and LPFT already employ salary sacrifice cycle-to-work schemes. Another consideration is making e-bikes available through these schemes, as some staff members may have longer distances to travel than others.





Travel plans

Travel surveys can be used to inform travel planning, as collecting data on cycling, public transport, electric vehicle use and car sharing can give a more accurate picture of travel and transport emissions.

Encouraging staff, patients and visitors to share cars through car sharing schemes could reduce greenhouse gas emissions. At the Trust level, priority parking spaces could be introduced whilst at the System level, the council could be encouraged to explore car sharing lanes.

Councils

Lincolnshire County Council's Local Transport Plan outlined a vision for transport in Lincolnshire that values providing good inter- and intra-regional access whilst maintaining the value of the natural environment in the region's sensitive rural areas. The council also outlined in their Carbon Management Plan that the decarbonisation of transport systems across the region is central to reducing carbon emissions, especially as demand for transport continues to rise across the region.

Carbon Footprint

The pie chart shows the carbon footprint for our member organisations' business travel during 2019/20. It will be necessary to reduce Transport emissions by 1,473 tCO₂e by 2024/25. This will facilitate the system to reach net zero by 2040.

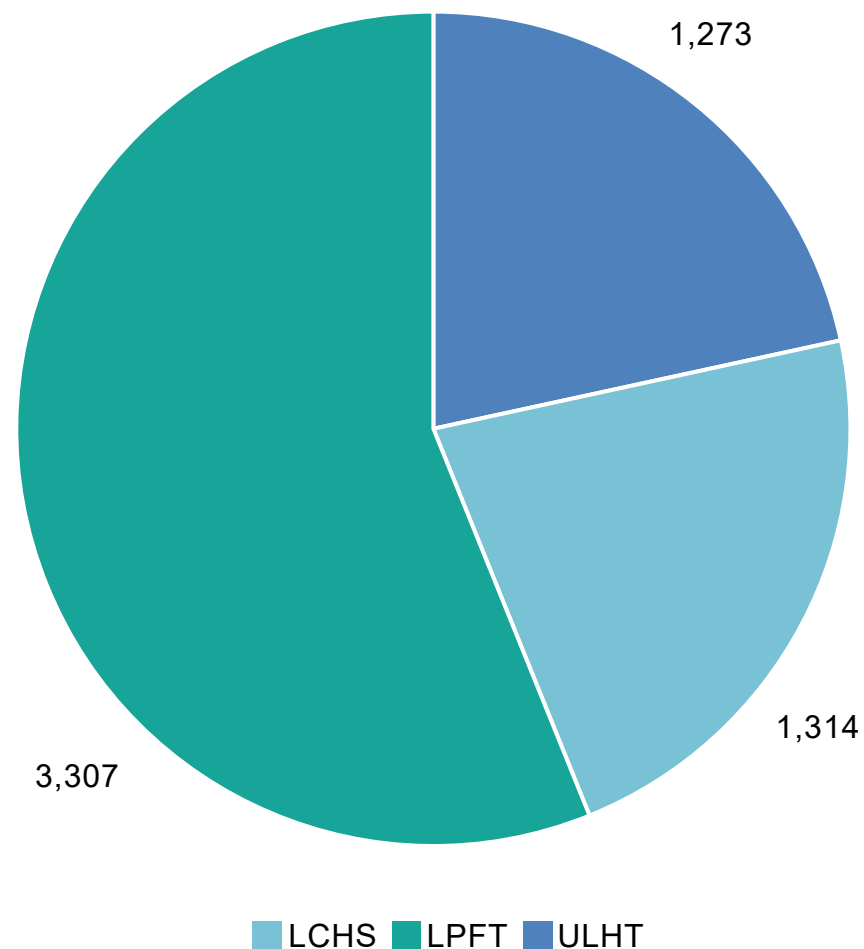


Figure 12: Emissions from business travel for member organisations in tCO₂e in 2019/20, at a time when the CCG was a statutory body.



Estates and Facilities



The carbon footprint across the built environment of the system is significant. Overall, the health and care system in England is responsible for an estimated 4% of the country's carbon emissions.

The ICS member organisations provide important services across numerous sites, meaning that our energy and resource consumptions are substantial. Therefore, we need to optimise energy use in our buildings, reduce waste, and move away from using fossil fuels to meet NHS net zero goals.

The estate comprises a mixture of buildings of different types, ages and usage, which presents challenges to retrofitting resource efficiency measures and heating improvements. Within the primary care estate there is a range of ownership models across individual GPs, GP partnerships, private sector, and NHS Property Services.. This presents challenges in the decarbonisation of the estate.

A potential method to reduce the environmental impact of our estate is improving utilisation of space, which can reduce running costs and potentially free up surplus land. One programme aimed at achieving this is One Public Estate (OPE), a collaboration between the Local Government Association (LGA) and the Cabinet Office's Government Property Unit.

OPE is a programme geared towards supporting locally led partnerships of public sector bodies to collaborate on public service delivery strategies and estate needs.





There are regular Asset Challenge Workshops at a District Level to support the integration of services, opportunities to improve utilisation and estate rationalisation.

Through the Towns Fund we have also created partnerships with other partners to utilise their facilities to deliver care and services.

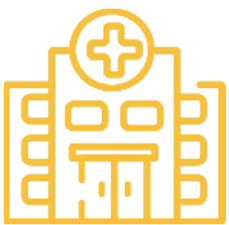
The NHS is an active partner in the Greater Lincolnshire OPE Board. Successes include the co-location of blue light services in Lincoln and Sleaford alongside the commitment to procure the same desk and meeting room booking software to support multi-agency working. GP staff already work out of District council space in South Holland, and our PCN Alliance has office accommodation within North Kesteven District Council offices.

The NHS in England is facing growing financial and service pressures at a time of rising demand. 'Placed-Based Systems of Care: a way forward for the NHS in England' proposes an approach to tackling these challenges. It argues that NHS organisations need to move away from a 'fortress mentality' whereby they act to secure their own individual interests and future, and instead establish place-based 'systems of care' in which they collaborate with other NHS organisations and services to address the challenges and improve the health of the populations they serve.

This has begun through a shared estates and facilities services partnership arrangement between LPFT and LCHS to deliver efficiencies, build resilience and reduce duplication in the management of our combined estate. This arrangement is now in its second year of full delivery mode. Further estates partnership opportunities with ULHT are now being explored.

We will be following the four-step approach within the NHS' 'Estates 'Net Zero' Carbon Delivery Plan' to address our estate:

1. Making every kWh count: Investing in no-regrets energy saving measures.
2. Preparing buildings for electricity-led heating: Upgrading building fabric.
3. Switching to non-fossil fuel heating: Investing in innovative new energy sources.
4. Increasing on-site renewables: Investing in on-site generation.



The pie chart shows the carbon footprint for our member organisations' building energy during 2019/20. The CCG was the statutory

commissioning organisation at that time. It will be necessary to reduce building energy emissions by 7,221 tCO₂e by 2024/25. This will facilitate the system to reach net zero by 2040.

The Greater Lincolnshire Local Enterprise Partnership (LEP) aims to drive economic growth within the region, collaborating with private and public sector leaders. Members of the ICS sit on the Energy Board, representing the perspective of the NHS around clean energy and innovation. If these partnerships can establish the innovations most appropriate for use in Lincolnshire, they can be fed directly into the member organisations within the system to further decarbonise.

One potential energy solution for the decarbonisation of electricity and heat is the use of decentralised energy networks. When Lincolnshire County and District Councils explored heat networks, they established that seven multi-building heat networks already exist. These networks can be expanded, while their use in new developments is to be encouraged within 500m of an existing district heat network, or within 1km of renewable or waste heat source. New buildings across the integrated care system will take these considerations into account. At the Trust level, electrically powered heating systems, heat pumps, and infrared heating can be explored and implemented through a decarbonisation of heat plan.

At present our member organisations are encouraged to procure 100% renewable electricity and at present, all three Trusts have committed to this target. To go a step beyond, the procurement of Green Gas could also be explored and facilitated by the system.

Given the current geopolitical situation and extremely high energy costs, decreasing energy consumption is an immediate priority. This can help to reduce the associated cost of divesting from fossil fuel energy, which can be done through detailed building energy surveys. These can provide robust energy efficiency recommendations at each of our sites, building upon the works already completed.

On-site renewable energy systems such as solar photovoltaics and integrated large battery storage technologies can also be used to decarbonise and provide additional resilience in the event of a power outage.

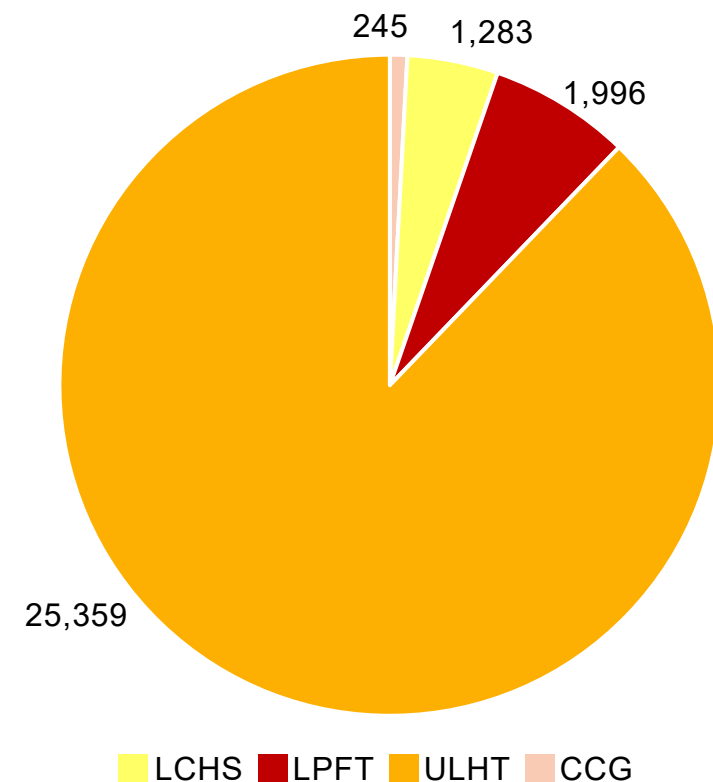


Figure 13: Emissions from our building energy for member organisations in tCO₂e in 2019/20, at a time when the CCG was a statutory body.



Capital Projects



The Built Environment of the NHS influences both the quality of our care and our environmental impact.

How we design and construct our buildings in the future will play a decisive role in our collective ability to achieve net zero. Buildings have significant environmental impacts in terms of emissions resulting from the use of gas, electricity and water. Improving the energy efficiency of a building is pivotal to reducing these impacts, as detailed in the previous section.

However, there are embodied carbon emissions within materials, such as cements, steel and glass which are used in the construction of buildings. These indirect 'Scope 3' emissions are generally much greater than emissions caused by the operation of a building. We can explore how these embodied emissions can be reduced alongside the County Council and other partners. Through our work with the Local Enterprise Partnership, Colleges and Team Lincolnshire we support the development of local businesses, skills and supply chains.

Cement and concrete production on its own accounts for a huge 8% of all global greenhouse gas emissions from all sources, according to the Dutch Environmental Assessment Agency.

The system's plans will focus on the reduction of building emissions from all sources, including Building Research Establishment Environmental Assessment Method's (BREEAM) 'Excellent' or above standards.





Although it is a small percentage of emissions, saving water is important when reaching net zero and aligning with SDGs. Global warming is likely to put increasing pressure on clean water supplies, so sustainable water use will be an important way for the NHS to adapt to climate change.

As a water efficiency and leak preventative measure, we will look to facilitate the installation of Automatic Meter Readers (AMRs) to water networks across the primary and secondary estate.

This will help our member organisations to pinpoint areas of high water usage, understand how and where water is being used, locate leaks and take remedial action.

Water conservation and sustainable drainage shall also be explored. Rainwater harvesters collect rainwater for non-potable purposes, such as for flushing toilets. They will help reduce water stress and potentially alleviate flooding by attenuating surface water run-off in storm events.





Waste

For larger Trusts such as ULHT, a high waste output can contribute significantly to their total carbon footprint.

The most effective way of reducing waste emissions is by following the waste hierarchy: Reduce, Reuse, Recycle and Recovery.

- Reduce: Avoid disposal of items by reusing and redistributing products.
- Reuse: Reclaim medical equipment after use by patients.
- Recycle: Increase recycling rates through staff awareness campaigns and by implementing more dry mixed recycling bins.
- Recovery: Recover energy from waste by converting it to Refuse Derived Fuel (RDF).

These principles must be embedded across the ICS including across primary and secondary care. The ICS as an anchor institution and partner, also strives to ensure that we facilitate the move to a circular economy, continuously reducing waste and increasing what we can reuse.

Water and waste

The pie chart shows the carbon footprint for our member organisations' water and waste during 2019/20. It will be necessary to reduce building energy emissions by 83 tCO₂e by 2024/25. This will facilitate the system in reaching net zero by 2040.

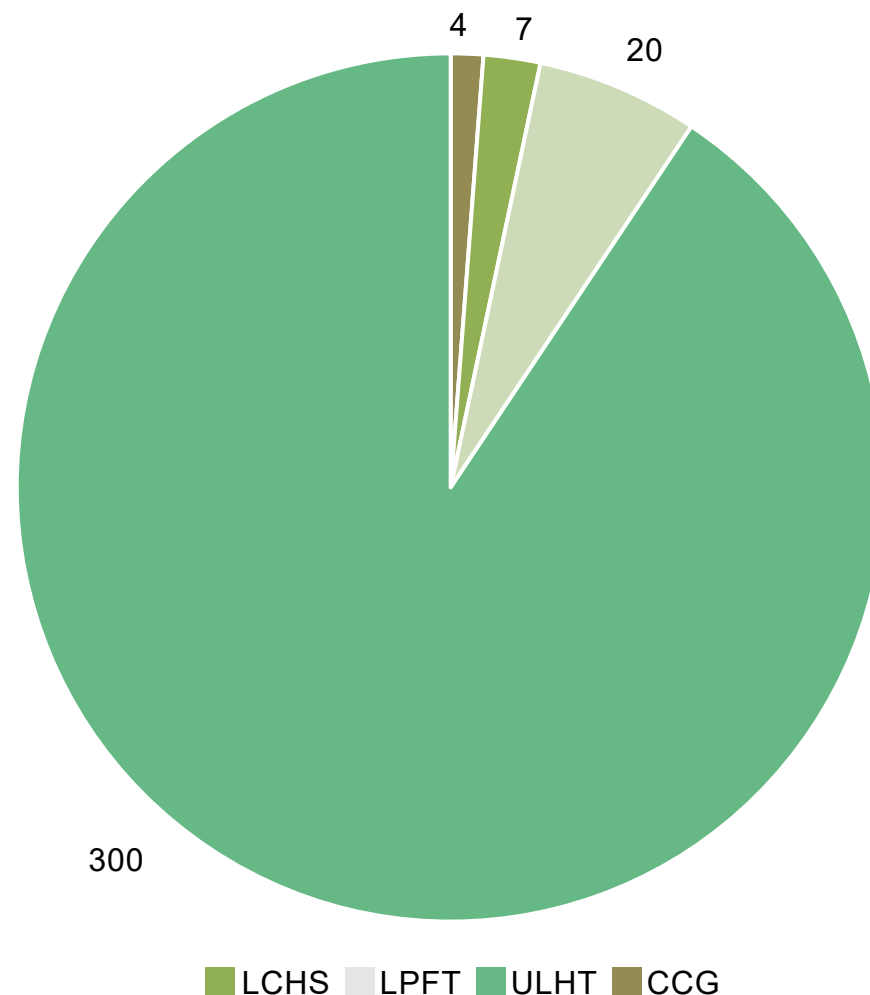
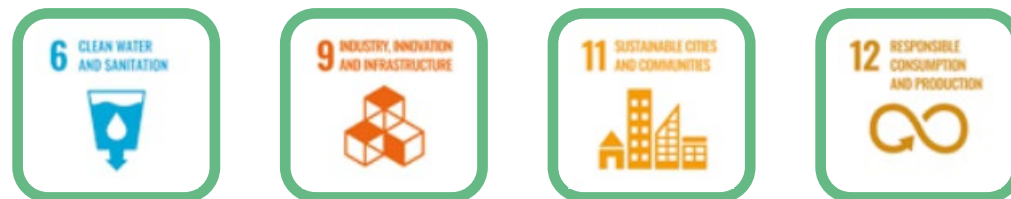


Figure 14: Emissions from our water and waste for member organisations in tCO₂e in 2019/20, at a time when the CCG was a statutory body.



Green Space and Biodiversity



“Access to greenspaces have positive mental and physical health impacts, and these beneficial effects are greatest for those from socioeconomically disadvantaged groups. However, these groups also have the least access to greenspaces.” – Delivering a Net Zero NHS

Access to greenspace at a regional level has been linked to good mental health and wellbeing for our communities, whilst the plants in our greenspaces absorb carbon dioxide from the atmosphere.

Lincolnshire ICS will consider opportunities and risks for biodiversity in the areas we operate, such as our priority habitats: lowland mixed deciduous woodland, traditional orchards, wet woodland, and wood-pasture and parkland.

At the Trust level, biodiversity is encouraged through projects such as NHS Forest. This can be utilised by Trusts to improve the greenspace across our estates. Across the system we have implemented a recognition programme to say thank you to our colleagues for their commitment, endurance, and skill during the coronavirus pandemic. Working alongside the Woodland Trust, we have offered each NHS member of staff to plant a commemorative tree as part of the NHS Woodland Lincolnshire programme.

With respect to our stakeholders, The University of Lincoln has introduced a hedgehog friendly campus to help protect this species and maintain biodiversity. The Greater Lincolnshire Nature Partnership have set an ambitious objective to ensure that there will be no net loss of priority or other semi-natural habitat by 2025.





Medicines



The Long Term Plan commits the NHS to reduce GHG emissions from anaesthetic gases by 40% (which on its own could represent 2% of the overall NHS England carbon footprint reduction target that the NHS must meet under Climate Change Act commitments) and significantly reduce GHG emissions by switching to lower global warming potential (GWP) inhalers. We will support our member organisations in achieving these commitments across the system. Prescriptions written by GPs and filled by community pharmacies mean that primary care will be instrumental in decarbonising medicines.

Across medicines there will be a move away from polypharmacy, towards self-care to prevent medicines waste. This includes patients taking responsibility for ordering their own medication. It is important that our regional communications on this topic aligns with the rest of the NHS.

Nitrous oxide

There are innovations in capturing and catabolising exhaled nitrous oxide, including 'cracking' devices. Such devices are being trialled by other NHS trusts, and if rolled out, will dramatically reduce the amount leaking into the atmosphere.

Furthermore, nitrous oxide use is steadily falling in surgery, as more efficacious anaesthetic and analgesic agents are superseding its use. However, Entonox™ still plays an important role in maternity.





Methoxyflurane (Pentrox™) pen-inhalers can be used instead of nitrous oxide to treat moderate to severe pain associated with trauma. Methoxyflurane can be self-administered under medical supervision, in a similar fashion to nitrous oxide. It has a lower global warming potential (GWP) than nitrous oxide and switching to methoxyflurane would lessen emissions at point-of-use.

However, this comes at a cost, as methoxyflurane is delivered in non-reusable 3ml inhaler pens, creating additional non-recyclable waste.

Desflurane

Desflurane is a fluorinated volatile anaesthetic. Like many fluorinated compounds (such as refrigerants and propellants), it has a very high GWP. Desflurane has a GWP rating of 2,540, meaning it's 2,540 times more potent as a greenhouse gas than carbon dioxide.

Other volatile anaesthetics, such as sevoflurane and isoflurane have far lower GWP ratings, 130 and 510 respectively. Shifting away from desflurane to these alternatives will significantly reduce emissions. However, both sevo- and isoflurane use will have an impact on the atmosphere.

The NHS Standard Contract and engagement efforts with clinicians have targeted a reduction of desflurane as a percentage of all volatile gas use by volume, from 20% in 2020/21 to 10% in 2021/22. In line with Delivering a 'Net Zero' National Health Service, in 2022/23 the contract target for desflurane use has now reduced to 5% or less across all NHS providers.

Inhalers

Inhalers help to open the airways and allow more air to move in and out of the lungs, helping people to breathe during asthma attacks. Asthma and other breathing-related health issues can often be attributed to air pollution, which this plan is seeking to reduce. In reducing greenhouse gas emissions, inhaler prescriptions may fall leading to a cycle of greenhouse gas emission reduction.

The NHS Standard Contract stipulates that 30% of all inhalers prescribed across NHS England should be Dry Powder Inhalers (DPIs), potentially saving 374 ktCO₂e per year, according to the NHS Net Zero report.

New Impact and Investment Fund (IIF) indicators have been released, which provide an additional steer on prescribing lower-carbon inhalers. Dry-powder inhalers are an appropriate choice for many patients and contain as little as 4% of the GHGs emissions per dose compared with metered-dose inhalers (MDIs). Fluorinated gases in MDIs mean that each 10ml to 19ml inhaler canister has the equivalent emissions of 30 to 80kg of carbon dioxide! ULHT and LCHS prescribe inhalers, whereas LPFT only continues to fill existing inhaler prescriptions, and thus have no direct control over the inhalers that the Trust prescribes.

We will need to work with PCNs and the Local Pharmaceutical Committees (LPCs) to reduce inhaler emissions across the system, including the use of inhaler return schemes. When inhalers decompose in landfill, the potent greenhouse gases in the canisters are released into the atmosphere. If all inhalers in the UK were returned for safe disposal, the NHS could save around 512,330 tCO₂e!



Supply Chain and Procurement



The NHS is a major purchaser of goods and services, with NHS England alone procuring around £30 billion of goods and services annually. Procurement has major potential social, economic, and environmental impacts both locally and globally.

This includes the use of local suppliers, the climate performance of our equipment and estate, and preventing modern slavery in supply chains. An ICS has a pivotal role in developing sustainable procurement practices within the System and its partner organisations.

Within the ICS, most items and services are procured through centralised NHS/government frameworks, such as the NHS Supply Chain. These centralised frameworks already provide best value through bulk purchasing power and consolidation of orders. LCHS and ULHT are pre-existing procurement partners, with a joint procurement strategy to reach net zero in their supply chains.

However, there is latitude to join forces with other public bodies and partner organisations across the System to increase buying power; achieving better economies of scale and influence over the environmental and social aspects of specialist and local products and services procured via the tendering process.

We are committed to engaging with our suppliers to meet Green Plan targets and support the sustainable procurement objectives of NHS England wherever practicable. We can support partner organisations enhance their own sustainable procurement practices and potentially create an System-wide sustainable procurement strategy that all partner





agencies can use.

The NHS, in line with recent government requirements, is mandated to adopt new social value and environmental standards now and in the future. The Evergreen Sustainable Supplier Framework was launched in January 2022, and from April 2022, all NHS tenders will include a minimum 10% net zero and social value weighting (as per [Policy Procurement Note 06/20](#)).

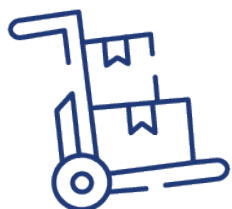
From April 2023, contracts above £5 million will require suppliers to publish a carbon reduction plan for their direct emissions as a qualifying criterion (as per [Policy Procurement Note 06/21](#)).

By 2030, all suppliers will be required to demonstrate progress in line with the NHS' net zero targets, through published progress reports and continued carbon emissions reporting.

These additional requirements will enable us to determine the carbon and social impact of the products and services we buy more accurately, and ensure suppliers are reducing the emissions associated with their operations and products.

In the interim, we will explore ways to reduce single-use plastic items and research how we can incorporate reusable items such as masks and aprons into our clinical practice. These products are currently purchased through the NHS Supply Chain, which holds the ambition to reduce plastics across the value chain. This will help us to facilitate the move away from a linear economy to a circular economy.





Product retainment and lifecycle extension

Ensuring best value for money and robust social and environmental benefits in our procurement processes will remain a core principle for the wider NHS and across the system.

Product lifecycle analysis will ensure products are kept in service for as long as possible, and maintenance and repairability, fundamental to a circular economy, drives down waste and may have economic benefits in the medium to long term.

NHS Trusts already maintain medical equipment in good working order, as per the manufacturer's and the Medical and Healthcare Products Regulatory Agency's (MHRA) guidance. Only when an item is no longer supported by the manufacturer, or is beyond economic repair, are items considered for disposal.

However, items such as mobility aids (walking frames, crutches and walking sticks), given to outpatients often are never returned to the issuing authority. This has a financial impact, as new items are continually procured to make up the loss, but also environmental impacts – the resources being used in the manufacture of equipment and the incorrect disposal of 'waste' mobility aids by the public.

Mobility aids are robust pieces of kit, with long service lives. Reclaiming, cleaning/refurbishing and reissuing mobility aids would negate useful items being scrapped. Furthermore, a pool of serviceable mobility aids could be used by partner organisations, with additional cost saving and social benefits for communities where care is delivered. LCHS is one of our Trusts that has begun to explore the re-use of walking aids at one of their sites, which they are looking to scale up further.

NHS England Sustainable Procurement Objectives		
Net Zero	Modern Slavery	Social Value
Achieve the NHS Supply Chain Net Zero Targets	Eliminate Modern Slavery in the NHS supply chain both domestically and abroad	Ensure NHS procurement is a force for good helping local economies and improves wider determinants of health

Table 12: Official NHS Sustainable Procurement Objectives Source: NHS website





Food and Nutrition



The NHS Long Term Plan commits us to promoting plant-forward diets and reducing unhealthy options like sugary drinks on NHS premises. Not only will these actions help prevent obesity and non-communicable disease, but they will also play a role in reducing our greenhouse gas emissions and environmental impact.

Food production accounts for up to 26% of global greenhouse gas emissions[1]. While promoting healthier foods and reducing emissions, the NHS can also source more food from local and regional producers where possible, increasing the positive economic impact for our communities and reducing the emissions associated with food transport.

We will work to fulfil Long Term Plan priorities for food provision on our premises, promoting plant-forward diets, higher welfare and more sustainable food options, and supporting regional producers wherever we can.

At the Trust level, LCHS and LPFT provide salads and sandwiches made and procured locally from the kitchen at ULHT. Both Trusts also have patient surveys for meals to ensure satisfaction and reduce waste and increased their menu choices to accommodate more vegetarian options. At LPFT, a Trust dietitian is producing menus to promote and support healthier eating across units to allow patients to cook for themselves using locally-sourced ingredients.

The Lincoln Food Partnership promotes fairer, greener and healthier food for all by reducing food miles, food citizenship, tackling food poverty, reducing food waste and its ecological footprint, and helping to implement community food growing. Any of the lessons learned from this partnership could be implemented across the system.





Climate Adaptation



“As climate change accelerates globally, in England we are seeing direct and immediate consequences of heat waves and extreme weather on our patients, the public and the NHS. Adaptation is the process of adjusting our systems and infrastructure to continue to operate effectively while the climate changes. It is critical that the NHS can ensure both continuity of essential services, and a safe environment for patients and staff in even the most challenging times.”

- Greener NHS

Climate-related hazards that have been identified as posing a distinct threat to our region include sea level rise, an increase in seasonal extremes and rising temperatures.

The low-lying nature of Lincolnshire will contribute to exacerbating the effects of climatic change. This makes the region susceptible to increased storm activity and rising sea levels. Flooding can cause damage to the estate; therefore, it is vital that developments across our ICS are resilient in nature. To improve resilience across the region, it is imperative to integrate mitigation and adaptation climate policies, create a risk management process, and ensure that developments are aligned to latest climate projections.

As for the actions within Lincolnshire that have already been taken, over £200,000 has been secured by Lincolnshire County Council, Lincolnshire Chalk Streams Trust and the Lincolnshire Chalk Streams Project from the Government's Green Recovery Challenge Fund. This fund will enable the Lincolnshire Chalk Streams Team to install nature-based solutions in the River Rase catchment to allow the chalk stream to adapt to climate change. This 18-month project will enable the team





to install natural flood management schemes over 24.3 kilometres, including field bunds, leaky barriers, scrapes, ponds, re-profiling and two or more habitat enhancements, such as improving cattle drinking areas to reduce erosion of the banks.

The changing climate poses risks for vulnerable populations in our community, but also impacts the Trusts' estate, their ability to operate and the supply chain.

Climate change has serious implications for our health, wellbeing, livelihoods and society. Its direct effects result from rising temperatures and changes in the frequency and strength of storms, floods, droughts, and heatwaves — with physical and mental health consequences (The Lancet, 2017).

The NHS Long Term Plan reinforces the requirement to embed resilience and sustainability into our healthcare services. Climate change adaptation is critical to achieving this. The impacts of climate change on our health, services, infrastructure and our ability to cope with extreme weather events will place significant additional demands on our services in the future.

Climate change adaptation in the NHS is about organisational resilience and the prevention of avoidable illness, embracing every opportunity to create a sustainable, healthy and resilient healthcare service. Reducing our impact on the environment may not only help to mitigate against climate change, but reduce our organisational running costs, ensure business continuity, and reduce health inequalities. Above all, it's about ensuring that the NHS, our buildings, our services, our staff and our patients are prepared for what lies ahead.

The ICS will analyse climate change risks and develop actions for our care delivery, estate planning and management, including flood risks across our estate and service area. The Local Climate Impacts Profile (LCIP) for Lincolnshire aimed to increase the council's understanding of the county's vulnerability to severe weather events.

The Green Masterplan as produced by Lincolnshire County Council set an objective to develop an Adaptation Strategy, which has been echoed by our ICS. The ICS and its partner organisations will develop a climate change adaptation plan to mitigate the consequences to health and service delivery of climate change.

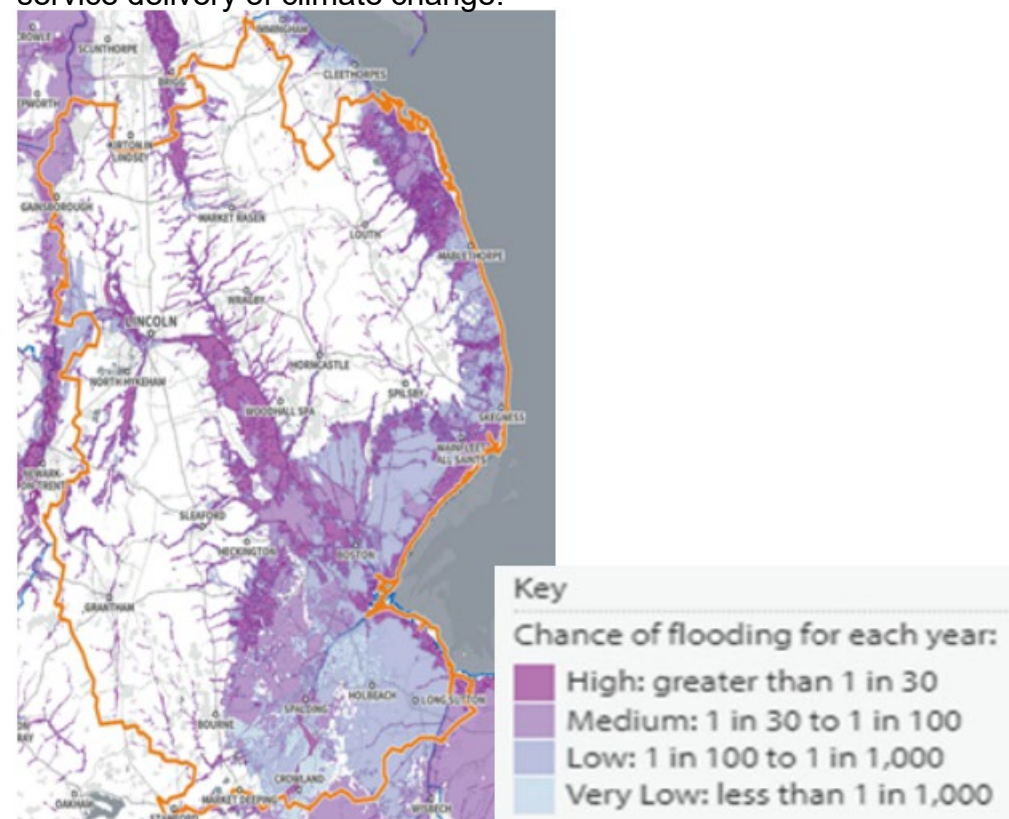
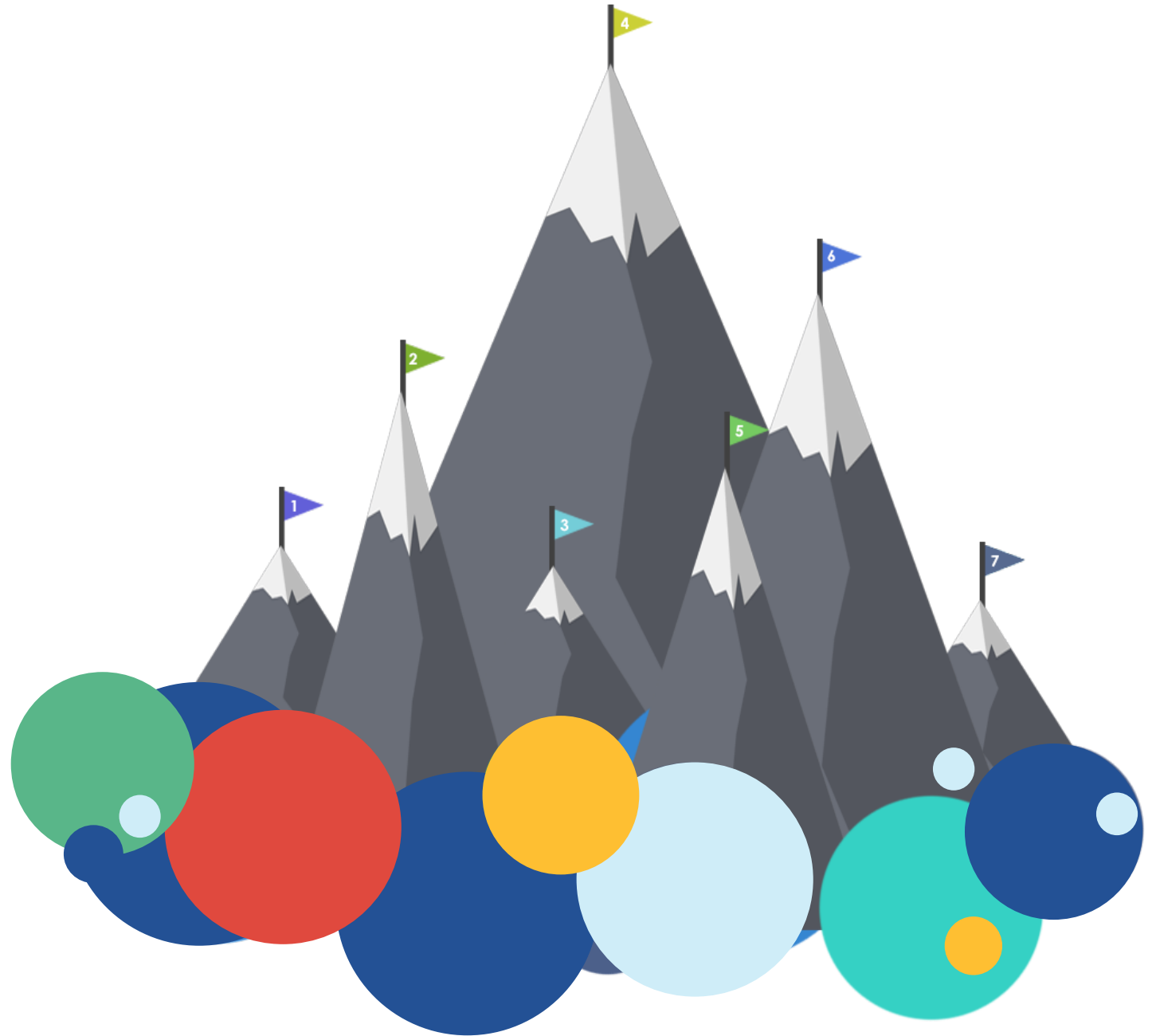


Figure 15: Map displaying the risk of flooding across Lincolnshire.

Challenges

- 1 Rurality
- 2 Digital Literacy
- 3 Workforce Retention
- 4 Access to Funding
- 5 Access to EV Charging
- 6 Deprivation
- 7 Access to Public Transport



In each of the areas of focus, there are barriers to achieving net zero, as shown in the Mountain Graphic above. The system will need to address these challenges and navigate the barriers that may stand in the way of fulfilling the targets set out in this Plan.

Many of these challenges are social barriers. Workforce retention is a national issue, and one that the NHS needs to address to maintain the quality of healthcare provided. This is a wider issue across Lincolnshire being dealt with through the People Board and through partnership working with local authorities, guided by the NHS at a national level.

Digital literacy was highlighted as a barrier to progressing the digital transformation of our services. Improving our digital infrastructure can only be practical if our patients continue to have equal access to care. Digital education is therefore vital in our efforts to continue to evolve our services, while maintaining standards of patient care.

Access to transport is another key challenge to overcome. EV charging availability is in part determined by local authority engagement and public demand. The same is true for accessibility to public transport, which is primarily facilitated by local governing bodies. Therefore, at a system level, collaboration with partners and local authorities will be needed to facilitate better, sustainable transport links across Lincolnshire. The rurality of the region is added barrier and means that much of the improvements to transport will need to focus on providing safe and efficient transport links to areas of lower population density.

Funding is an ongoing barrier to progress in reaching net zero, as many of the actions suggested within this plan will have a significant upfront cost. Retrofitting buildings and procuring reusable PPE for example, can add more monetary pressure on systems that already struggle to stretch budgets. These pressures can be alleviated by accessing government funding. An example of this is the installation of charging infrastructure through the On-street Residential ChargePoint Scheme, which is available to local authorities.

Socioeconomic factors underpin every one of these potential barriers. It is therefore vital to address the high levels of social deprivation in certain areas of Lincolnshire, and the impact this has on access to healthcare, providing safe transport, improving education, boosting employment, and securing project funding.

Social Sustainability Promotion

Equality, Diversity and Inclusion

NHS Lincolnshire has a commitment to design and implement policies, procedures and commissioning services that meet the diverse needs of our local population and workforce, ensuring that none are placed at a disadvantage.

The urgency to address health inequalities has never been greater, and our county faces unique challenges as we seek to ensure that our services reach every person in Lincolnshire, especially those most vulnerable.

Levels of health vary significantly across Lincolnshire, with stark differences between county areas as well as different groups within our diverse communities. As a rural county with poor public transport links, our local communities must also often rely on cars to attend appointments and access services.

Infrastructure matters such as internet and phone connection issues and low levels of digital literacy must also be recognised when assessing accessibility of digitalisation, such as phone and online appointments, so that these means seeking to increase accessibility do not unintentionally create further inequality.

Our system will address this challenge with a variety of collaborative work with our partner organisations. The Lincolnshire Health and Wellbeing Board brings together key people from the health and care system, with the aim to reduce health inequalities and improve health and wellbeing across the county. The Joint Working Executive (JWEG) set out a comprehensive review of the health inequalities in Lincolnshire in the Health Inequalities Programme.



Our Equality, Inclusion and Human Rights Objectives are reflective of those set by the CCG, which has since been absorbed into the NHS Lincolnshire ICB:

1. Workforce data and staff support

- Enhance the data quality held on staff via ESR, through an updated data-cleansed system to improve data recording and monitoring.
- WRES/WDES delivery of annual submissions to NHSE and implementation of action plans.
- GPG reporting – dependent on the workforce numbers (threshold 250 staff), the ICB will need to consider submitting gender pay gap data and so be responding to this data with an action plan.
- Introduce staff networks to support the development of different protected characteristics.

2. Visible leaders to champion EDHR

- Leaders to be at the forefront of improving engagement with vulnerable groups/populations with regards to service change.
- Managers to be more involved in implementing EDHR actions/initiatives as part of their roles and responsibilities.
- Support providers to address barriers to accessing services to by patients.

3. EDHR training

- Assess current EDHR training provision and staff professional development.
- Improve the contents and uptake of EDHR mandatory training for all staff.
- Introduce more face-to-face EIHR related training to support the work of staff from leaders to front line staff.

4. Standards and Charter Marks

- EDS version 3 – All future work will be done in line with the new framework which will be released in 2020 by NHS England and piloted over the year
- Disability Confident – to obtain Leader Status by 2022
- Identify other relevant EDHR Charter Marks and assess/update new policies and practices towards achieving these.

5. Equality Objective for Lincolnshire CCG to support BAME staff and communities in response to national reports.

- Objective: Implement actions to assess the disproportionate impact of Covid 19 on BAME staff and communities in line with the associated health inequalities issues raised in the PHE disparities report.

Social Sustainability

Social value quantifies the net value that our system can provide to society, including through employment, economic growth, communities, innovation and the environment. The last is of focus within this plan, although all five of these themes are considered.

The NHS is mandated to consider the economic, social and environmental wellbeing in procurement of services contracts per the Social Value Act (2013).

Creating social value can reduce health inequalities through action on the social determinants of health, for example through the improvement of employment and housing. In this Green Plan, we have considered how the planned actions will contribute towards the sustainability of a geographical area in addition to the project's direct benefit to the community and benefits to individuals.

Actions that result in the employment of local residents or target groups such as young unemployed people and requiring contractors to pay a living wage and minimising negative environmental impact can be found in the Workforce and Systems Leadership section. Building local supply chains and procuring with the voluntary, community and social enterprise (VCSE) sector are found in the Supply Chain and Procurement section.

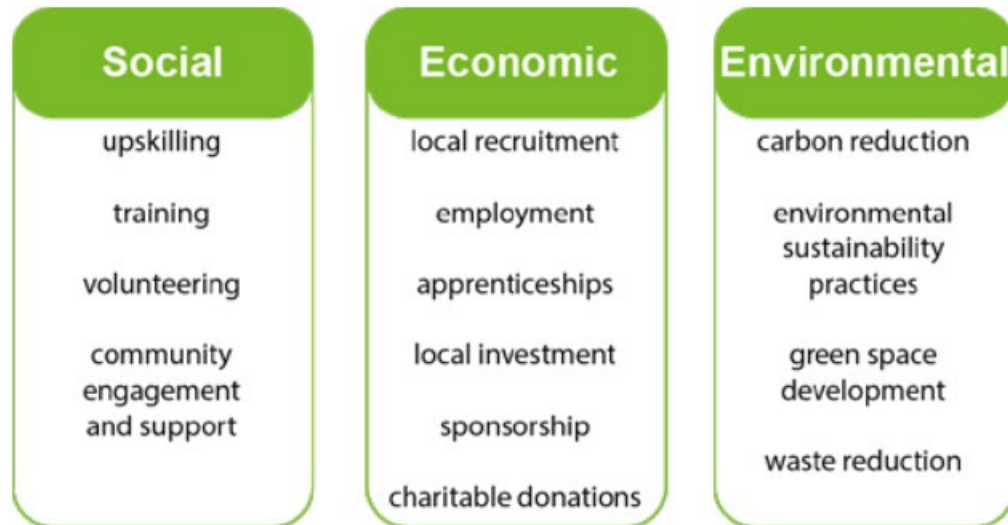
We will also strive to roll out services first in the most disadvantaged areas to allow them more time to benefit from new services, whilst ensuring that there are additional efforts to assure equality of access to services for those living furthest from service provision. Embedding social value across the whole commissioning cycle and future procurements will allow it to become a golden thread throughout procurement activity.



Social Value

Social Value can be defined as the quantification of the relative importance that people place on the changes they experience in their lives.

Activities to deliver these changes can be categorised into economic, social and environmental benefits. Some examples are shown below.



With more than 60% of the NHS carbon footprint based within the NHS supply chain of over 80,000 suppliers, we need the support of every supplier if we are to reach net zero by 2045.

Supporting the NHS in reducing harmful carbon emissions offers suppliers the opportunity to play a part in improving health now and for future generations. Going forward the system will follow the NHS roadmap to help suppliers align with our net zero ambition between now and 2030. This approach builds on [UK Government procurement policy \(PPN 06/21\)](#).

Net Zero Supplier Roadmap

From April 2023

The NHS will adopt the Government's 'Taking Account of Carbon Reduction Plans' (PPN 06/21), requiring all suppliers with new contracts for goods, services, and/or works with an anticipated contract value above £5 million per annum, to publish a carbon reduction plan for their direct emissions.

From April 2024

The NHS will expand this requirement for all new contracts, irrespective of value.

From April 2027

All suppliers with contracts for goods, services, and/or works for any value, will be expected to publish a carbon reduction plan that takes into account the suppliers' direct and indirect emissions.

From April 2028

New requirements will be introduced overseeing the provision of carbon foot-printing for individual products supplied to the NHS. The NHS will work with suppliers and regulators to determine the scope and methodology.

From April 2030

Suppliers will only be able to qualify for NHS contracts if they can demonstrate their progress through published progress reports and continued carbon emissions reporting through the supplier framework.

Conclusion

The system Green Plan was composed to ensure a collaborative approach to health and sustainability would be taken across Lincolnshire. Some of our member organisations already work in partnership, such as the Joint Procurement Strategy between ULHT and LCHS, and the Estates partnership between ULHT and LPFT.

By facilitating this collaboration using our partner organisation connections we can achieve a more unified system, where learning can be shared when Trusts are making strides. Examples of this include the analysis of procurement emissions in ULHT's plan and working in partnership with health and social care services at LCHS.

Throughout this plan it has been established that there are some regional barriers to achieving NHS net zero. Each ICS has its challenges, and for Lincolnshire our rural location, health inequalities and social deprivation along the coast, and struggles with workforce retention will make delivering the plan more difficult. However, we can collaborate with our stakeholders to overcome these challenges as they are bodies that also want to deliver more sustainable practice. This includes Lincolnshire County Council, which has committed to a net zero target of 2050.

Lincolnshire ICB takes full ownership of this plan and commits to its targets. Each aspect of the health service has its role to play in the NHS net zero, and we can ease this journey by working together. By becoming a more sustainable ICS, we can help improve health outcomes across Lincolnshire through the impacts of our successes as we work through this plan target by target. Together we can become a greener, and healthier, NHS.



Glossary

Anchor institution

This refers to large, public sector organisations whose long-term sustainability is tied to the wellbeing of the populations they serve. Anchor institutions, who are rooted in their local communities, can positively contribute to their local area in many ways such as: widening access to quality work for local people; buying more from local businesses; reducing our environmental impact; using buildings and spaces to support communities; working more closely with local partners.

Clinical commissioning group

Clinically-led statutory NHS bodies responsible for the planning and commissioning of health services for their local area.

CO₂e

Refers to carbon dioxide equivalent emissions. The conversion of greenhouse gases into a singular 'currency' allows comparison of various greenhouse gases on the basis of their global warming potential.

Commissioning

The process of assessing need, planning, agreeing and monitoring services.

Equality, diversity and inclusion (EDI)

Refers to ensuring that our work and policies recognise diversity and allow fair treatment to all, creating equal opportunities for our colleagues and reflecting our diverse communities.

Greenhouse gas (GHG)

A group of gases that contribute to global warming. There are seven greenhouse gases:

Non-fluorinated gases:

Carbon dioxide (CO₂)

Methane (CH₄)

Nitrous oxide (N₂O)

Fluorinated gases:

Hydrofluorocarbons (HFCs)

Perfluorocarbons (PFCs)

Sulphur hexafluoride (SF₆)

Nitrogen trifluoride (NF₃)

Health inequalities

The unfair and unacceptable differences in people's health that arise because of where we are born, grow, live, work and age.

Integrated Care Board

The most recent national guidance states that this is the new NHS organisation that will be established on 1 April 2022, subject to legislation. We expect this is likely to be known publicly as "NHS Lincolnshire", but this is subject to the legislation being agreed through Parliamentary processes.

Integrated Care System (ICS)

Refers to the health and care system across Lincolnshire. There are 42 ICSs across the country. Within each ICS there is an Integrated Care Partnership and an Integrated Care Board.

Integrated Care Partnership

The broad alliance of organisations and representatives concerned with improving the care, health and wellbeing of the population, jointly convened by local authorities and the NHS. This term has now started to be used in the most recent national guidance. However, this is different to how we have used this term previously. It was previously used to describe our five place-based partnerships.

Modern methods of construction (MMC)

The design, planning, manufacture and pre-assembly of construction elements or components in a factory environment, prior to installation on site at their intended, final location.

Model of care

This broadly defines the way health and care services are organised and delivered.

Neighbourhoods

Based on local populations of between 30,000 and 50,000. Neighbourhoods, in some instances, may align with Primary Care Networks.

Net Zero

Negation of the amount of greenhouse gases produced by an organisation, achieved by reducing emissions and implementing methods of absorbing carbon dioxide from the atmosphere.

Off-setting

The action or process of compensating for carbon dioxide emissions arising from industrial or other human activity, by participating in schemes designed to make equivalent reductions of carbon dioxide in the atmosphere.

Place

A defined population that partners convene around to improve health outcomes across a population. This concept signifies the move away from operation as individual organisations.

Place based commissioning

Commissioners organising themselves so that they collaborate together to address the challenges and improve the health of any defined population.

Place-based partnerships

Planners and providers working together across health, local authority and the wider community, to take collective responsibility for improving the health and wellbeing of residents within a place, with a population of up to 500,000.

Primary care

Primary care is the first point of contact for healthcare for most people. It is mainly provided by GPs (general practitioners) but community pharmacists, opticians, dentists and other community services are also primary healthcare providers.

Primary Care Networks (PCNs)

GP practices working together with community, mental health, social care, pharmacy, hospital and voluntary services in their local areas in groups of practices. PCNs build on existing primary care services and enable greater provision of proactive, personalised, coordinated and more integrated health and social care for people close to home. Find out more on PCNs on the [NHS England website](#).

Provider Collaborative

Service providers will be collaborating at the various different levels of system, place and neighbourhood according to need. National guidance, [Working together at scale: Guidance on Provider Collaboratives](#) has been published and a Provider Collaborative Board (PCB) has been established to enable partnership working of the acute, mental health and community providers across Lincolnshire. The organisations that are involved as part of the collaborative are:

- Lincolnshire Partnership NHS Foundation Trust (LPFT)
- Lincolnshire Community Health Services NHS Trust (LCHS)
- United Lincolnshire Hospitals NHS Trust (ULHT)

Social value

This is about how we secure wider social, economic and environmental benefits for our population in addition to providing health and care. As anchor institutions we want to make the greatest positive impact possible on the lives of our communities to improve health and wellbeing and reduce health inequalities.

Wider determinants of health

The diverse range of social, economic and environmental factors which influence people's mental and physical health. These include employment, housing, crime, education, air quality, access to green spaces and access to health and care services, among other things.



Get in touch:
LICB.strategy.nhs.net



Lincolnshire Integrated Care Board



This Green Plan was created for NHS Lincolnshire Integrated Care Board in partnership with Inspired PLC.

