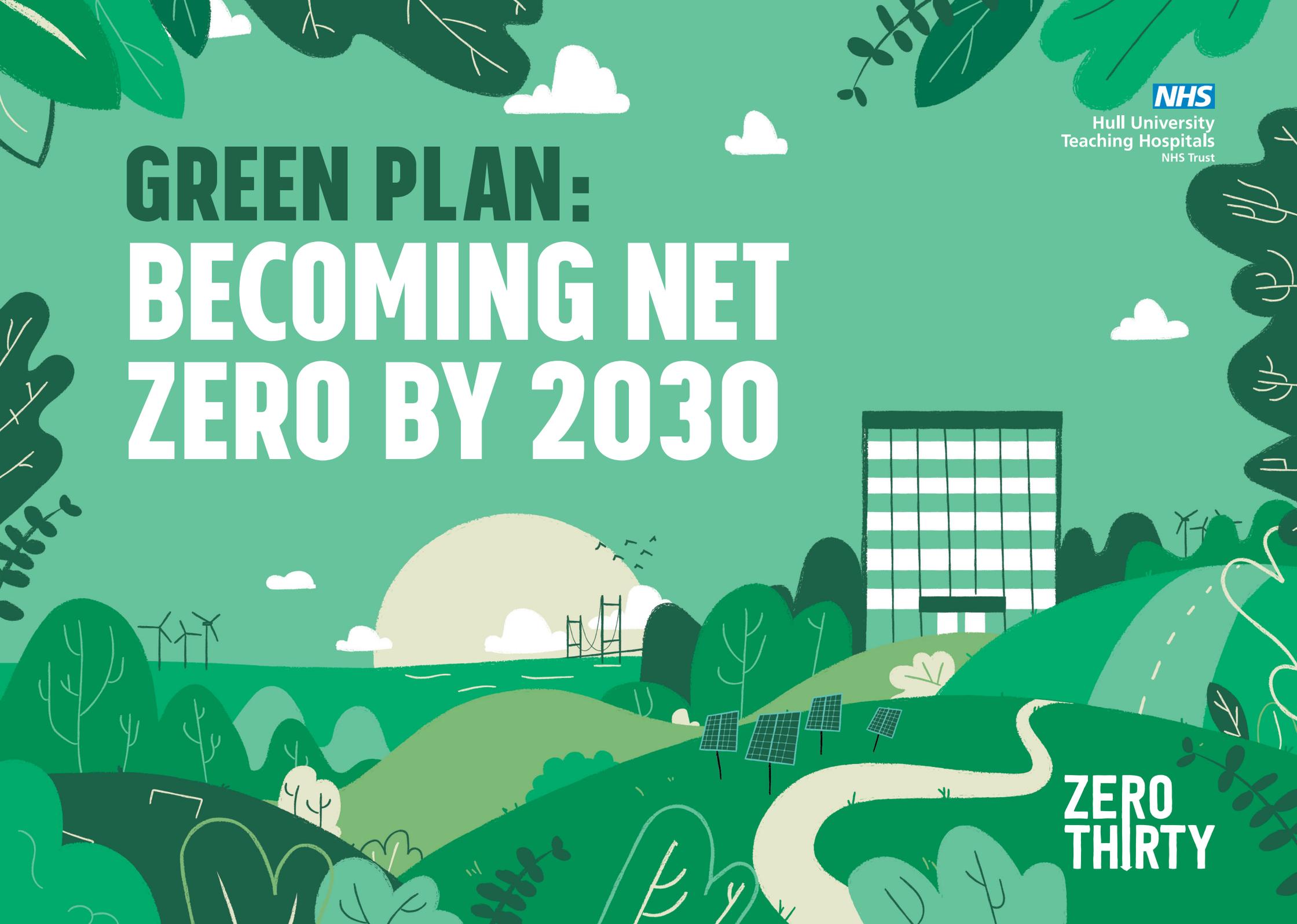




Hull University  
Teaching Hospitals  
NHS Trust

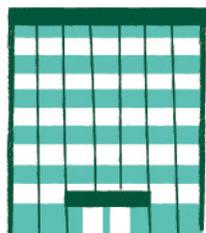
# GREEN PLAN: BECOMING NET ZERO BY 2030



ZERO  
THIRTY

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## GREEN PLAN: BECOMING NET ZERO BY 2030



**“THE GOAL OF SUSTAINABLE DEVELOPMENT  
IS TO MEET THE NEEDS OF TODAY, WITHOUT  
COMPROMISING THE NEEDS OF TOMORROW”**

**- BRUTLAND COMMISSION**

# FOREWORD



**Chris Long**, Chief Executive

**Sustainability in healthcare is changing, and we have a significant part to play.**

**Sustainability in healthcare is changing, and we have a significant part to play. Currently, as the NHS touches all our lives, it has a huge impact on our carbon footprint, producing 5.4% of the UK's total carbon emissions. That's equivalent to the greenhouse gas emissions of 11 coal-fired power stations.**

Whilst our recent focus has been very much about protecting patients, staff and the public in the face of a global pandemic, the NHS must not lose sight of the imminent health emergency that climate change could bring. That means more intense storms and floods, more frequent heat waves, and the wider spread of infectious diseases. Only the strongest and most determined response will impact on this, bringing with it direct improvements for public health and health equity.

In 'Delivering a net zero Health Service', we are informed that reaching our country's ambitions under the Paris Climate Change Agreement could see over 5,700 lives saved every year from improved air quality, 38,000 lives saved every year from a more physically active population, and over 100,000 lives saved every year from healthier diets. That's the equivalent of off-setting a coronavirus crisis every year from the middle of this century.

Closer to home, the Humber is one of the coastal regions around the world officially listed at high risk due to rising sea levels and increasing flood threat. With 90% of Hull standing below the high-tide line, the devastating floods of 2007 are a sign of things to come, should we choose to do nothing.

From every perspective, the case is compelling. We cannot retreat from climate change, and this will need to be embedded into everything we do.

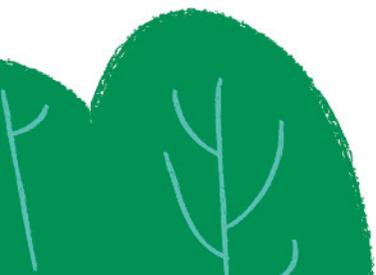
Of course, we will continue with our commitments to reduce carbon emissions, build resilience to the effects of climate change, minimise waste and pollution, and make the very best use of scarce resources. But we want to go further than that.

Our trust ethos encourages us to go where care leads, to do what is right, however bold, and deliver lasting change. That is why following our declaration of a climate emergency in 2020, we are now making an ambitious commitment to be net zero by 2030.

This puts us at the forefront of hospital trusts throughout the UK, and sends a strong message to the rest of the world that we're doing our bit to overcome the climate crisis.

We're rising to the challenge, showing others the way, and for that as a trust and a community,

**WE SHOULD BE VERY PROUD.**



# THE TRUST STRATEGY

## WHERE CARE LEADS...

We have four cornerstones on which our entire strategy is built:



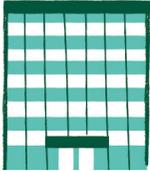
COMPASSIONATE CARE



A GREENER NHS



GROUNDBREAKING RESEARCH

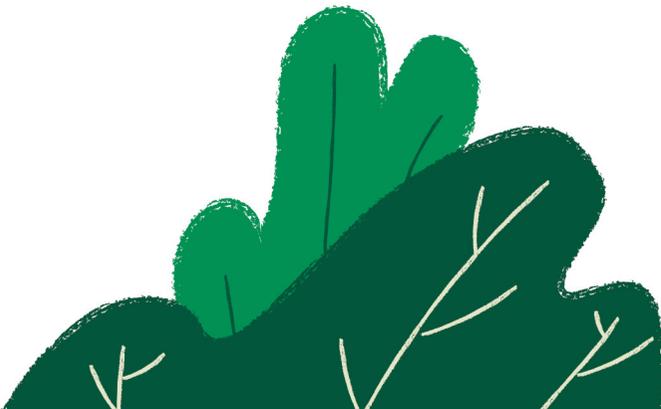


ONE INCLUSIVE TEAM

This sets the agenda for our annual objectives and every support is given to our operational teams so that they are delivered.

We want our trust to be a shining light in tackling the climate crisis, being one of the first in the country to achieve net zero by 2030.

We believe unequivocally that this is an area where care leads which is why it is fundamental to our trust strategy.

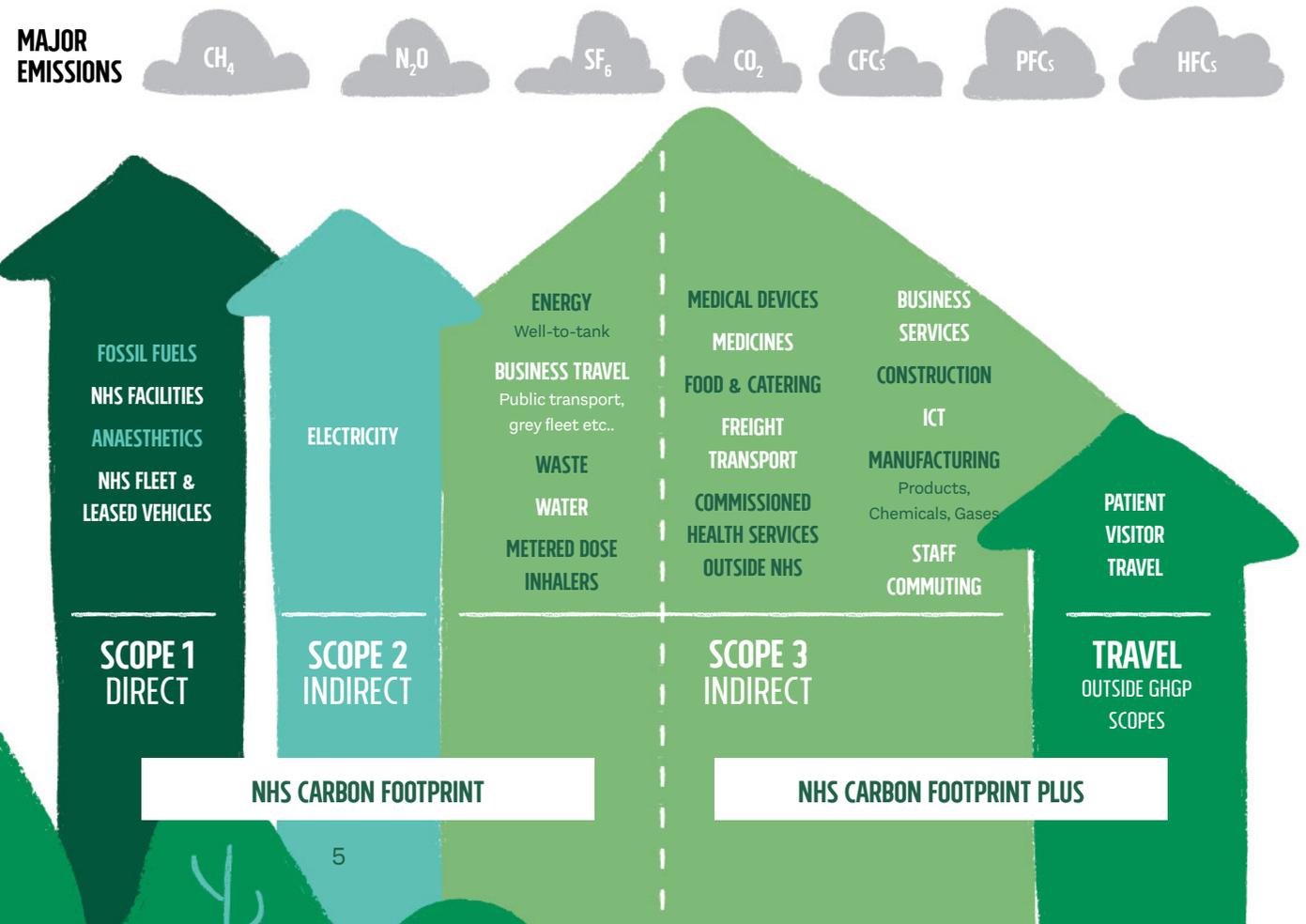


# THE NHS PATHWAY TO NET ZERO

## THE NATIONAL PICTURE

### THE NHS GUIDANCE SETS OUT TWO TARGETS FOR THE REDUCTION OF EMISSIONS:

- For the emissions we control directly (NHS Carbon Footprint), it's net zero by 2040, with an ambition to reach an 80% reduction between 2028 to 2032.
- For the emissions we can influence (NHS Carbon Footprint Plus), it's net zero by 2045, with an ambition to reach an 80% reduction between 2036 to 2039



**IN 2017, THE NHS SENT 15% OF  
ITS WASTE TO LANDFILL, A TOTAL  
OF 47,000 TONNES. A WEIGHT  
EQUAL TO 650 TIMES THE  
SPACE SHUTTLE.**



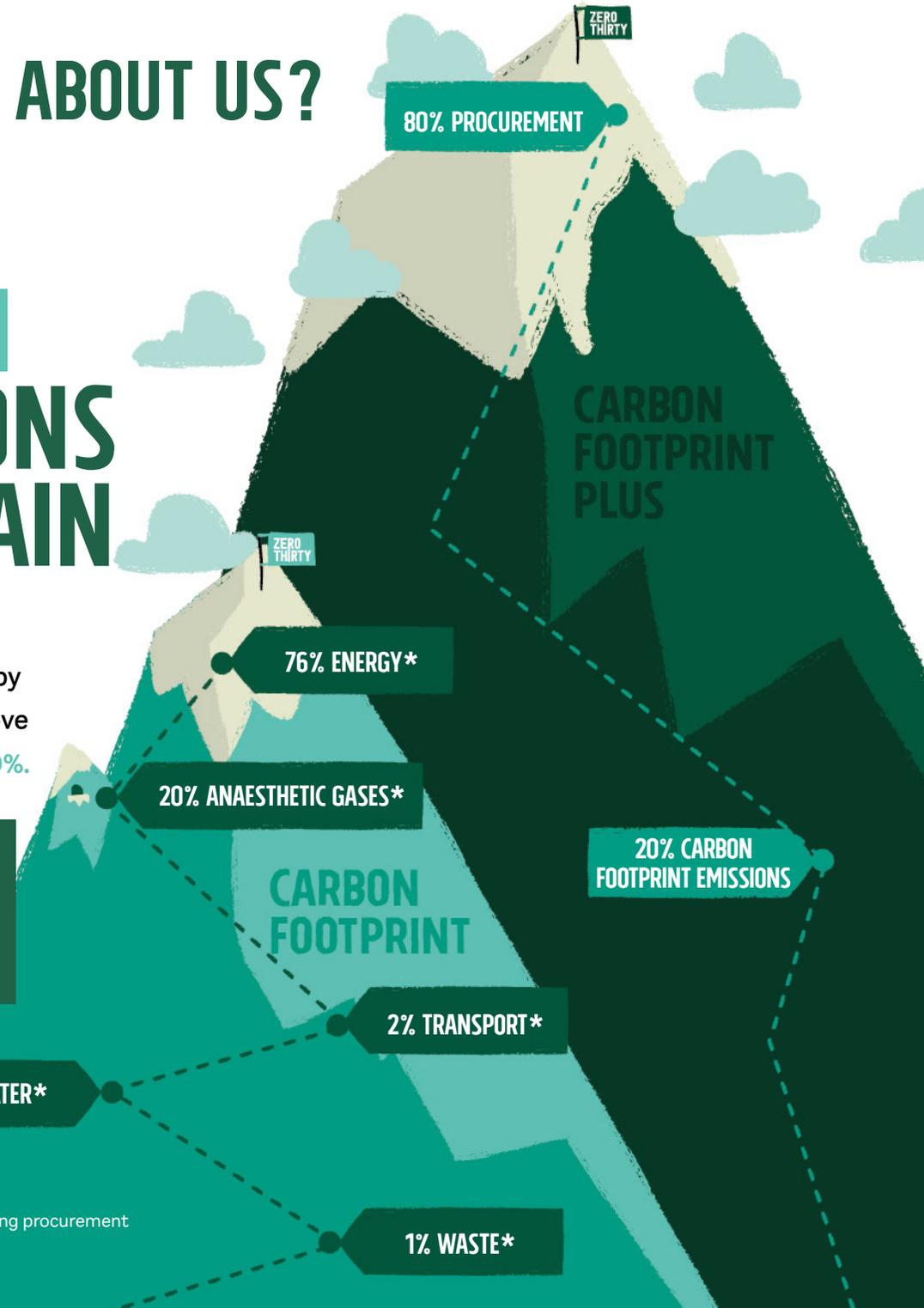
# AND WHAT ABOUT US?

# OUR CARBON EMISSIONS MOUNTAIN

The NHS has a target to achieve 80% reduction by 2032. We want to improve this by two years and 20%.

40% OF ALL EMISSIONS WITHIN THE NHS COME FROM ACUTE SETTINGS.

\*excluding procurement



## WHAT IT IS AND HOW WE'LL DO IT

Net Zero is the balance between the amount of carbon emissions produced and the amount removed from the atmosphere. We reach net zero when what we add is no more than what we take away.

As a trust we will seek to rapidly reduce our carbon emissions as much as possible. Where Net Zero cannot be achieved, we will offset this using carbon sequestration through rewilding or carbon capture on our own sites together with off site sources.

# WHAT WE CAN DO

## OBJECTIVES & TARGETS

We've already reduced our carbon emissions by 25% but there's still some way to go.

Here's what we want to achieve, and where:

### ENERGY, ESTATES AND FACILITIES

Upgrade our facilities to minimise energy use and replace fossil fuels with zero carbon sources and sustainable spaces for patients, staff and visitors.  
Reduce building emissions by 50% by 2028.

### SUPPLY CHAINS

Ensure sustainability is central to any purchases made.  
A minimum of 20% of the award criteria to be attributed to sustainability for all procurement by 2023.

### TRAVEL AND TRANSPORT

Promote low-carbon travel for patients, visitors and staff, and reduce our business journeys.  
25% of the trust fleet to be zero emissions by 2024.

### WASTE AND WATER

To reduce, reuse and recycle wherever possible.  
Zero waste to landfill by 2025.

### SUSTAINABLE CARE

Work with staff and patients on pathways that deliver more efficient and sustainable whole life care.  
Reduce anaesthetic gas emissions by 50% by 2025.

### GOVERNANCE AND PARTNERSHIP

Work with our partners to deliver shared sustainable goals within current guidance & legislation.  
Set an internal cost of carbon for all business cases.

### FUNDING AND FINANCE

Embed carbon reduction in financial mechanisms and decisions.  
Create a fund for significant investment into net zero projects.

### OUR PEOPLE

Inspire and inform our people and partners to make us net zero by 2030.

## HOW IT WILL WORK?

Let's take a closer look at what we want to achieve in each priority area, and how we will do it ...

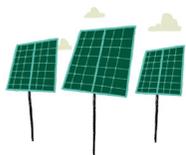


# BIG PROJECTS



## LIGHTING

20,000 light fittings at Hull Royal Infirmary and Castle Hill Hospital as well as smaller hospital sites around the city are to be replaced with SMART LED lighting after the trust was awarded a £12.6m grant to support its major green agenda.



## FIELD OF DREAMS

We have secured funding for a groundbreaking solar panel scheme at Castle Hill Hospital that will transform our carbon footprint.



## BUILDING INSULATION

A major project insulating buildings across the trust will massively reduce heat loss.



## HEAT PUMPS

Replacing our localised gas fired boilers throughout the trust with Air Source Heat Pumps.



## WIND FARM

We will contract with a renewable energy supplier in the medium term to supply our offsite electricity.



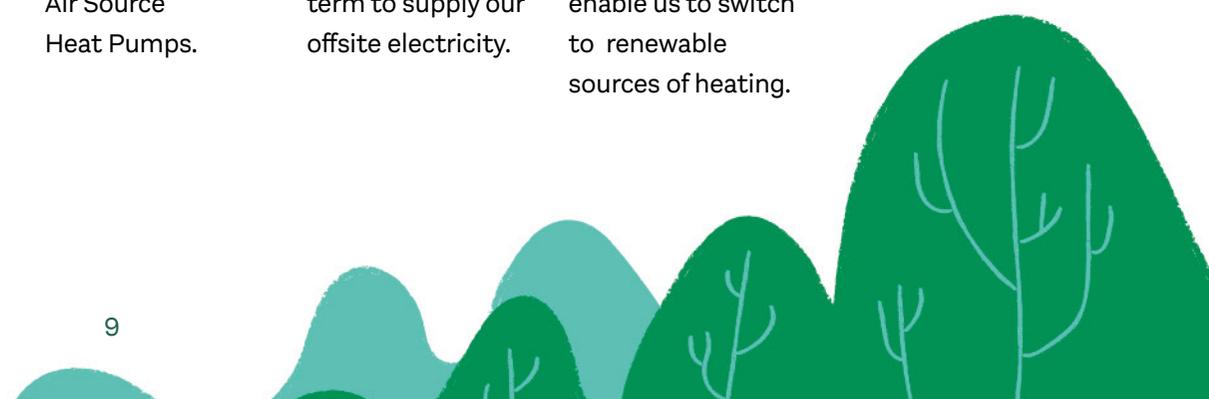
## DECARBONISE HEATING

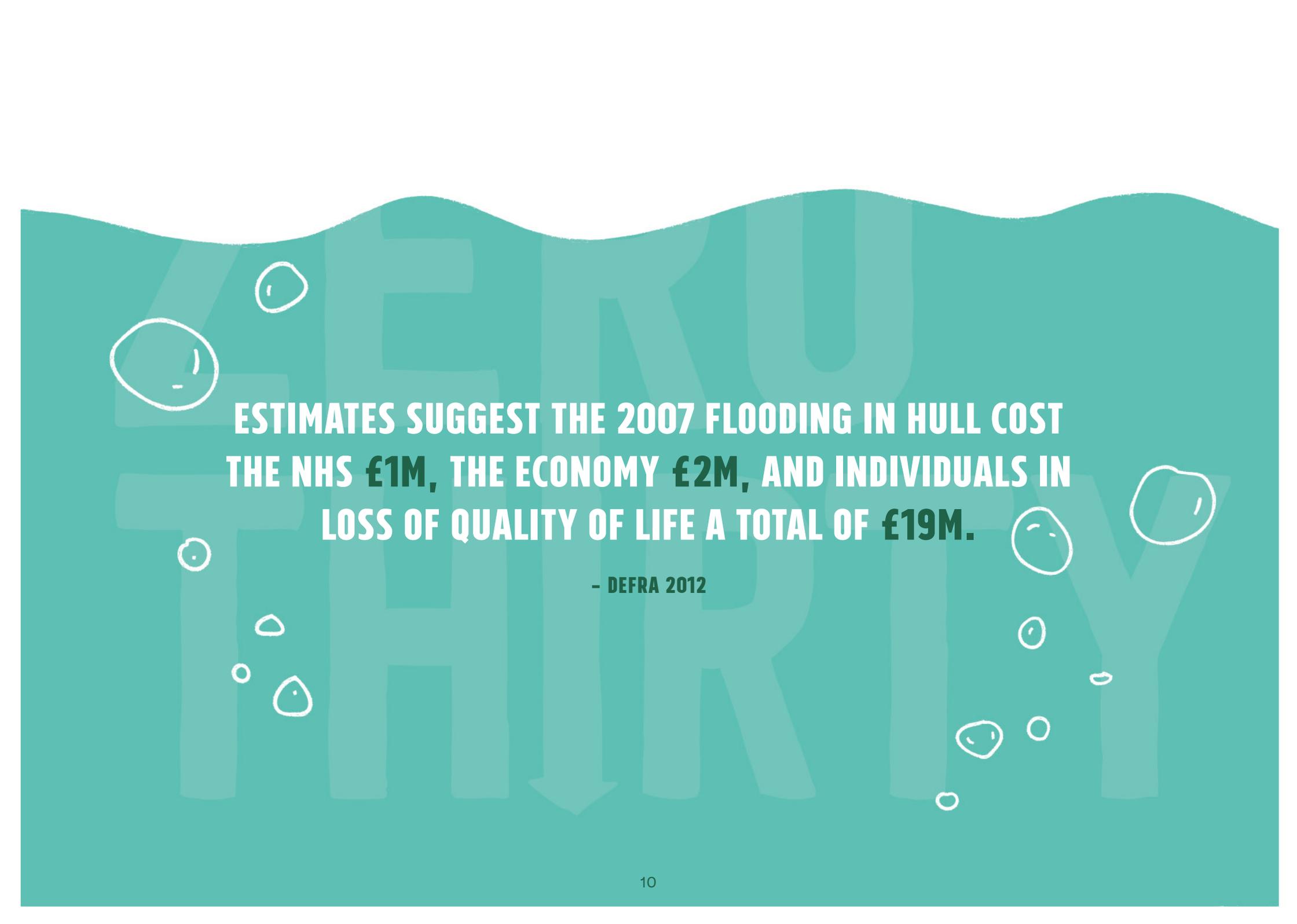
We will start installing a district heating system around our sites to enable us to switch to renewable sources of heating.



## ANAESTHETIC GASES

We will reduce the emission of anaesthetic gases by 50% by 2025.





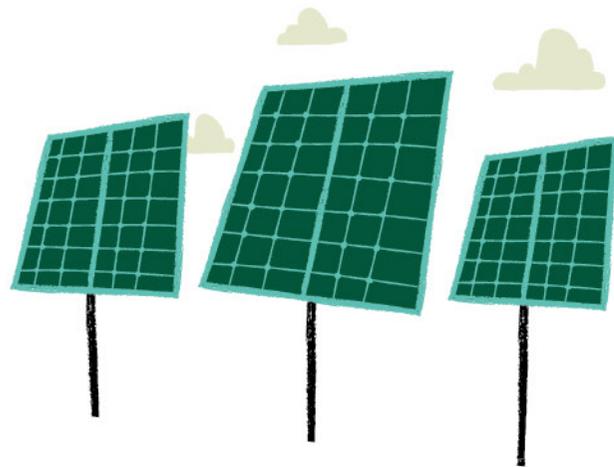
ESTIMATES SUGGEST THE 2007 FLOODING IN HULL COST  
THE NHS **£1M**, THE ECONOMY **£2M**, AND INDIVIDUALS IN  
LOSS OF QUALITY OF LIFE A TOTAL OF **£19M**.

- DEFRA 2012

# ENERGY, ESTATES AND FACILITIES

## WHAT WE WANT

Minimise energy use and replace fossil fuels with zero carbon sources and sustainable spaces for patients, staff and visitors.



### HOW WE DO IT

- Decarbonise the estate and infrastructure by 50% by 2028
- Improve insulation and air-tightness of buildings
- Staff training on energy reduction, cooling, localised heating and recycling
- Reduce energy demand within buildings
- Incorporate carbon in evaluation of projects
- All new build and refurbishments to meet low carbon standards
- Introduce low-carbon menus for staff and patients
- Develop a carbon reduction plan for our buildings

### HOW WE SCORE

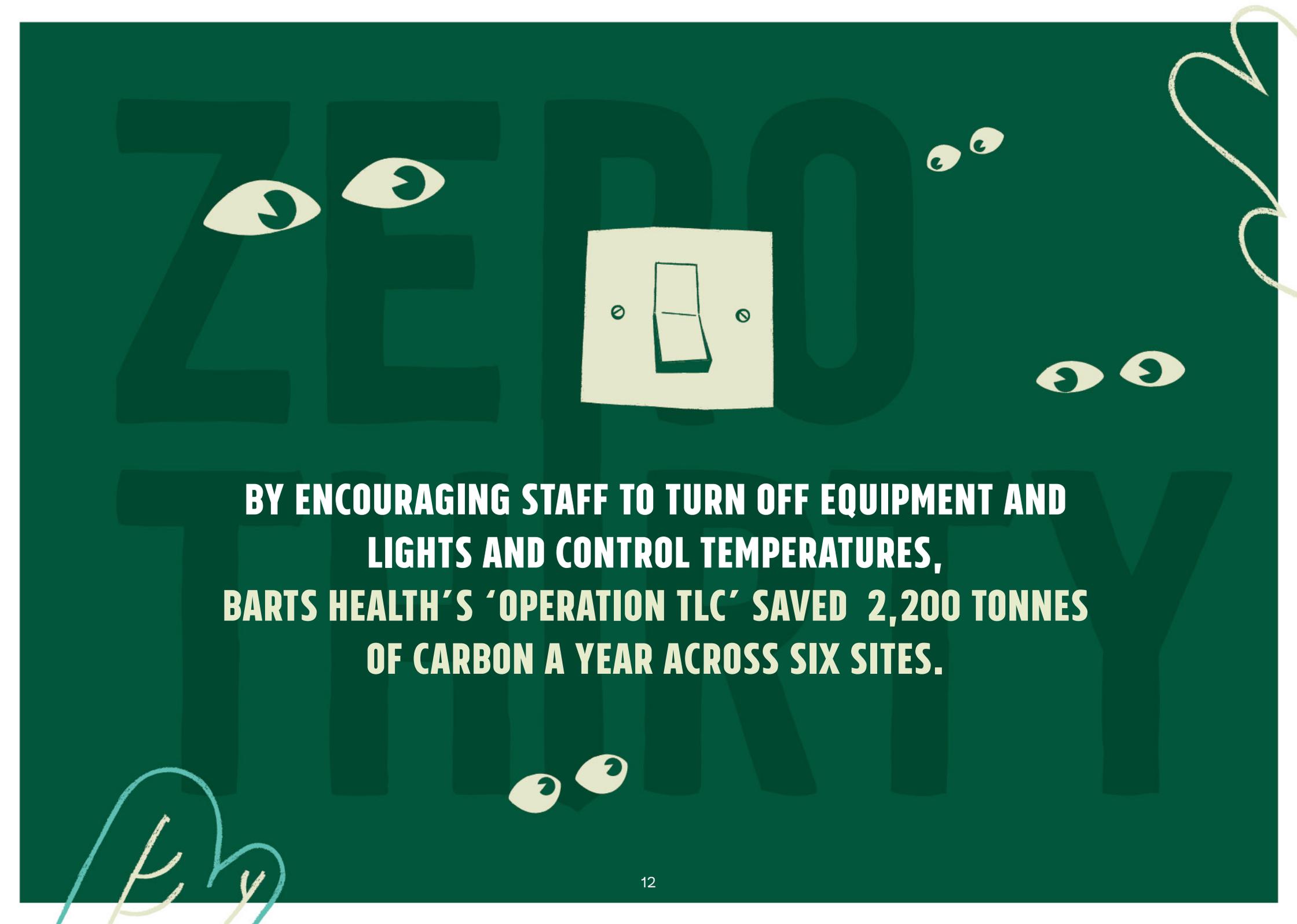
- Assess sustainability impact and carbon cost of completed schemes
- Monitor utility usage
- Report carbon emissions performance
- Ensure buildings are adapted to climate change risks



The NHS estate and its supporting facilities services – including primary care, trust estates and private finance initiatives – comprises 15% of the total carbon emissions profile. There are big opportunities for emission reductions in the secondary and primary care estates respectively, with significant opportunities seen in energy use in buildings, waste and water, and new sources of heating and power generation.

**“IT IS NOT BUILDING NEW ONES, BUT REBUILDING OTHER PEOPLE’S BUILDINGS THAT IS PERHAPS THE MOST URGENT AND DIFFICULT CHALLENGE THAT FACES THE ARCHITECTS OF THE FUTURE”.**

**– LLOYD ALTER, ARCHITECT AND GREEN DESIGN WRITER**



**BY ENCOURAGING STAFF TO TURN OFF EQUIPMENT AND LIGHTS AND CONTROL TEMPERATURES, BARTS HEALTH'S 'OPERATION TLC' SAVED 2,200 TONNES OF CARBON A YEAR ACROSS SIX SITES.**

# SUPPLY CHAINS

## WHAT WE WANT

Ensure sustainability is central to any purchases made.



### HOW WE DO IT

- Work with sustainable, ethical and local suppliers to meet or exceed our net zero targets by 2030
- Implement the use of life cycle costing within procurement decision making
- 20% of the award criteria to be attributed to sustainability by 2022, rising to 40% by 2030
- A paperless and digitally-optimised environment
- Remove single use plastics
- Reduce the amount of transportation packaging
- Establish targets to reduce emissions from procurement of pharmaceuticals

### HOW WE SCORE

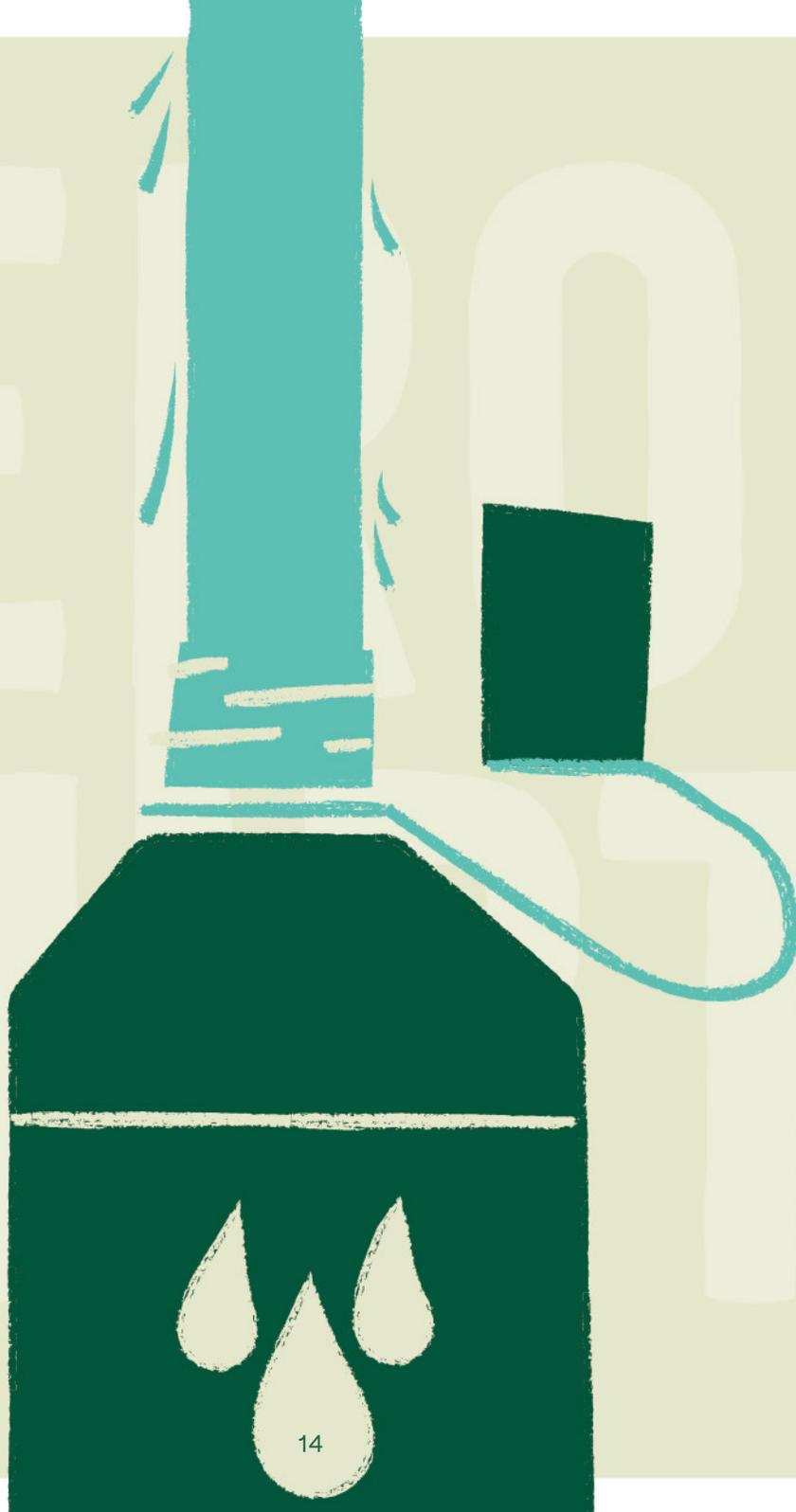
- Establish baselines
- Work to develop new foot-printing of supply chains and procurement
- Report on procurement emissions

The importance of tackling supply chain emissions

**“THE PROCUREMENT OF GOODS AND SERVICES ACCOUNTS FOR 72% OF THE CARBON IMPACT OF KIDNEY CARE. WITHIN PROCUREMENT, THE MAJORITY OF EMISSIONS ARE ATTRIBUTABLE TO PHARMACEUTICALS, MEDICAL EQUIPMENT AND WASTE SERVICES.”**

**– THE RENAL ASSOCIATION – GREEN NEPHROLOGY**

**USING A  
REFILLABLE  
BOTTLE FOR A  
WHOLE YEAR..**



**SAVES 64KG OF  
CO<sub>2</sub> COMPARED  
WITH SINGLE  
USE PLASTIC  
BOTTLES.**

# TRAVEL AND TRANSPORT

## WHAT WE WANT

Push low-carbon travel for patients, visitors and staff, and reduce our business journeys.

### HOW WE DO IT

- Work with suppliers to increase the efficiency of deliveries and to minimise carbon emissions
- Assist patients, visitors and staff to travel in more sustainable ways
- Increase the number of online patient appointments
- Reduce the amount of business travel. Limit and offset business flights
- Further encourage tele and video conferencing facilities
- Support the use of cycles and e-bikes with secure lockers, chargers, changing and shower facilities
- Increased use of electric vehicles for the trust fleet to 25% by 2024
- Reduce emission cap on staff car lease scheme to ULEV and zero emission vehicles

### HOW WE SCORE

- Annual snapshot survey detailing how staff, patients and visitors travel
- Work with suppliers to report & reduce mileage
- Evaluate travel analysis from zero thirty tools



**AROUND 3.5% OF ALL ROAD TRAVEL IN ENGLAND RELATES TO PATIENTS, VISITORS, STAFF AND SUPPLIERS TO THE NHS. THAT'S 9.5 BILLION MILES OF TRAVEL WHICH CONTRIBUTES AROUND 14% OF THE SYSTEM'S TOTAL EMISSIONS. OF THIS, 4% IS FOR BUSINESS TRAVEL AND FLEET TRANSPORT, 5% FOR PATIENT AND VISITOR JOURNEYS, AND 4% FOR STAFF COMMUTES\*.**

\*DELIVERING A 'NET ZERO' NATIONAL HEALTH SERVICE



**SAVING ONE CAR JOURNEY A WEEK OF 16.7 MILES  
(AVERAGE DAILY COMMUTE) REDUCES THE EQUIVALENT OF  
230KG OF CO<sub>2</sub> PER PERSON OVER A YEAR.**

# WASTE AND WATER

## WHAT WE WANT

To reduce, reuse and recycle wherever possible.



### HOW WE DO IT

- Maintenance of existing buildings
- Ensure the provision of water efficient appliances within new buildings
- Rainwater harvesting
- Work with contractors to reduce waste
- Work with suppliers to reduce packaging
- Educate staff on waste and recycling
- Explore on-site treatment of waste and water
- Borehole water supply
- Zero waste to landfill by 2025

### HOW WE SCORE

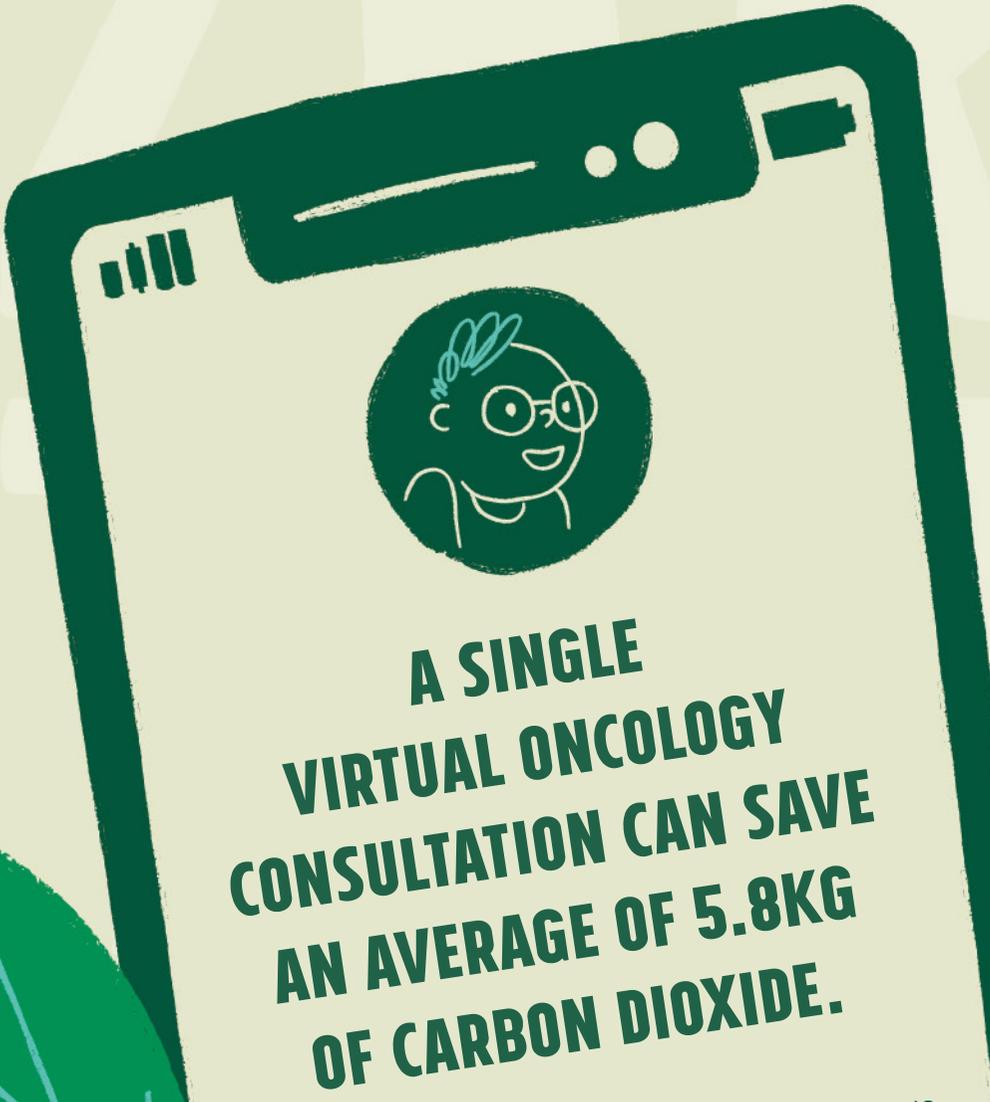
- Monitor usage
- Report against activity data and floor area
- Leakage monitoring
- Auditing of waste streams
- Measure the amount of overall waste recycled



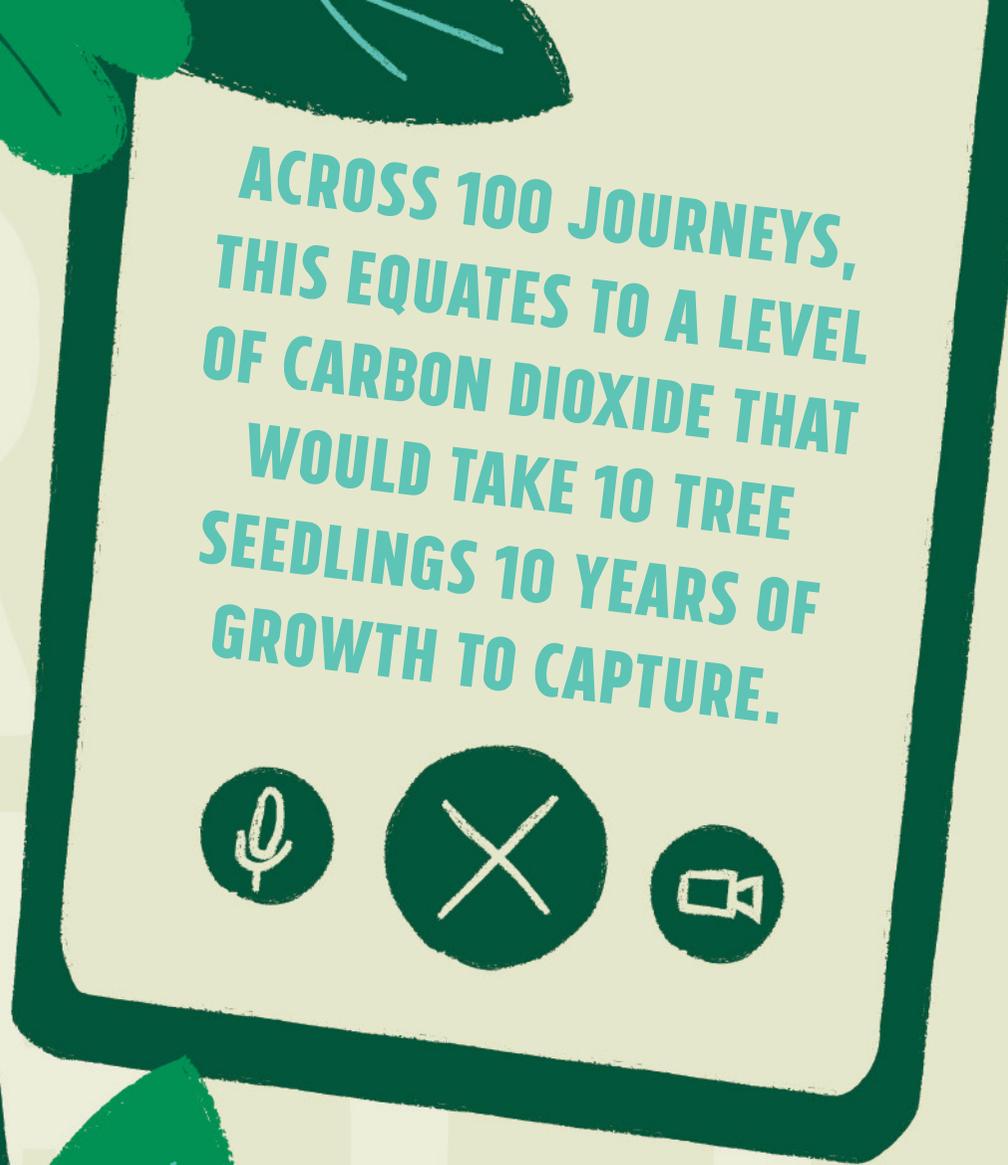
**THE TRUST WATER CONSUMPTION IS 314 MILLION LITRES OF WATER A YEAR. THAT IS EQUIVALENT TO 37,000 LITRES OF WATER FOR EACH MEMBER OF STAFF.**

**IF THE ENTIRE ADULT POPULATION OF ENGLAND AND WALES REMEMBERED TO TURN OFF THE TAP WHEN THEY WERE BRUSHING THEIR TEETH, WE COULD SAVE 180 MILLION LITRES A DAY – ENOUGH TO SUPPLY NEARLY 500,000 HOMES AND FILL 180 OLYMPIC SWIMMING POOLS!\***

**\*(ONE OLYMPIC-SIZED POOL IS 1 MILLION LITRES /1ML).**



**A SINGLE  
VIRTUAL ONCOLOGY  
CONSULTATION CAN SAVE  
AN AVERAGE OF 5.8KG  
OF CARBON DIOXIDE.**



**ACROSS 100 JOURNEYS,  
THIS EQUATES TO A LEVEL  
OF CARBON DIOXIDE THAT  
WOULD TAKE 10 TREE  
SEEDLINGS 10 YEARS OF  
GROWTH TO CAPTURE.**

# SUSTAINABLE CARE (TO COVER MEDICINE AND RESEARCH)



## WHAT WE WANT

Work with staff and patients on pathways that deliver efficient and sustainable whole life care.

Sustainable care is potentially the greatest area of opportunity for improvement within the health service as a whole. This is where we interact with patients and carry out required interventions. Not only does an efficient and effective pathway deliver better patient care but also a financial and carbon efficient system. With the challenges facing the NHS in the coming years these present a key focal point.

### HOW WE DO IT

- Establish and understand the key hot spots within the organisation
- Utilise the Sustainable Care Pathways Guidance to establish a baseline
- Introduce more virtual consultations
- Commission services with focus on more efficient whole-life care
- Remove desflurane from being used in the Trust as soon as possible.
- Reduce our emissions from anaesthetic gases by 50% by 2025.
- Reduce the use of Measured Dose Inhalers (MDI's) by 50% by 2025
- Reduce medicine wastage
- Promote recycling of MDI's
- Establish emissions from key pharmaceuticals
- Develop a clinical working group to educate, inform and target areas of opportunity

### HOW WE SCORE

- Measure and report the use of medicines, gases and their emissions
- Establish a baseline for clinical pathways
- The number of follow up appointments (right first time)
- Review changes to clinical pathways in establishing carbon reduction and sustainability improvements

**MEDICINES ACCOUNT FOR 25% OF EMISSIONS WITHIN THE NHS. A SMALL NUMBER OF MEDICINES ACCOUNT FOR A LARGE PORTION OF THE EMISSIONS, AND THERE IS ALREADY A SIGNIFICANT FOCUS ON TWO SUCH GROUPS – ANAESTHETIC GASES (2% OF EMISSIONS) AND INHALERS (3% OF EMISSIONS) – WHERE EMISSIONS OCCUR AT THE 'POINT OF USE'. THE REMAINING 20% OF EMISSIONS ARE PRIMARILY FOUND IN THE MANUFACTURING AND FREIGHT INHERENT IN THE SUPPLY CHAIN\*.**

\*DELIVERING A 'NET ZERO' NATIONAL HEALTH SERVICE

# GOVERNANCE AND PARTNERSHIPS

## WHAT WE WANT

Work with our partners to deliver shared sustainable goals within current guidance & legislation.

### HOW WE DO IT

- Global green & healthy hospitals
- Collaborative working with partner organisations
- Establish sustainability into the governance of trust processes and committees
- Monitoring & reporting on performance measures
- Ensure sustainability is included within business cases, service changes and board reports
- Set an internal cost of carbon for all business cases
- Sustainability committee established with trust leads
- Regular updates on performance against net zero targets

### HOW WE SCORE

- Record the good work and examples already in place
- Carbon Reduction Targets as net-zero by 2030
- Life-cycle costing or reporting
- Revise and review against net zero targets annually

# FUNDING AND FINANCE

## WHAT WE WANT

Embed carbon reduction in financial mechanisms and decisions.



### HOW WE DO IT

- Resources: reduce the demand, increase the efficiency
- Establish a carbon offsetting strategy
- Explore external funding options
- Business case requirement for inclusion of sustainability and cost of carbon
- Create a significant fund for net zero projects
- Reinvest savings
- Whole life costing of products, equipment and buildings

### HOW WE SCORE

- Post implementation review of changes to confirm carbon reductions or sustainability improvements
- Business cases prepared with cost of carbon included

“  
**IT IS ABSURD  
TO QUESTION  
WHETHER WE  
CAN AFFORD  
TO KEEP  
OUR PLANET  
LIVEABLE**”

- **FIONA HARVEY,**  
**ENVIRONMENT JOURNALIST**

## OUR PEOPLE

# WHAT WE WANT

Engage the workforce and change the culture to inspire our people to deliver sustainable healthcare.

### HOW WE DO IT

- A bespoke zero:thirty website/app
- Zero thirty champions to offer direction and impetus from the start
- Zero thirty network with regular news, views and meetings
- Zero thirty rewards can be won for saving energy, reducing waste and travelling sustainably
- Zero thirty training for leaders and sustainability ambassadors
- Zero thirty funds for any member of staff with a strong sustainability project
- Zero thirty awards for those who have made a real impact on key areas of sustainability

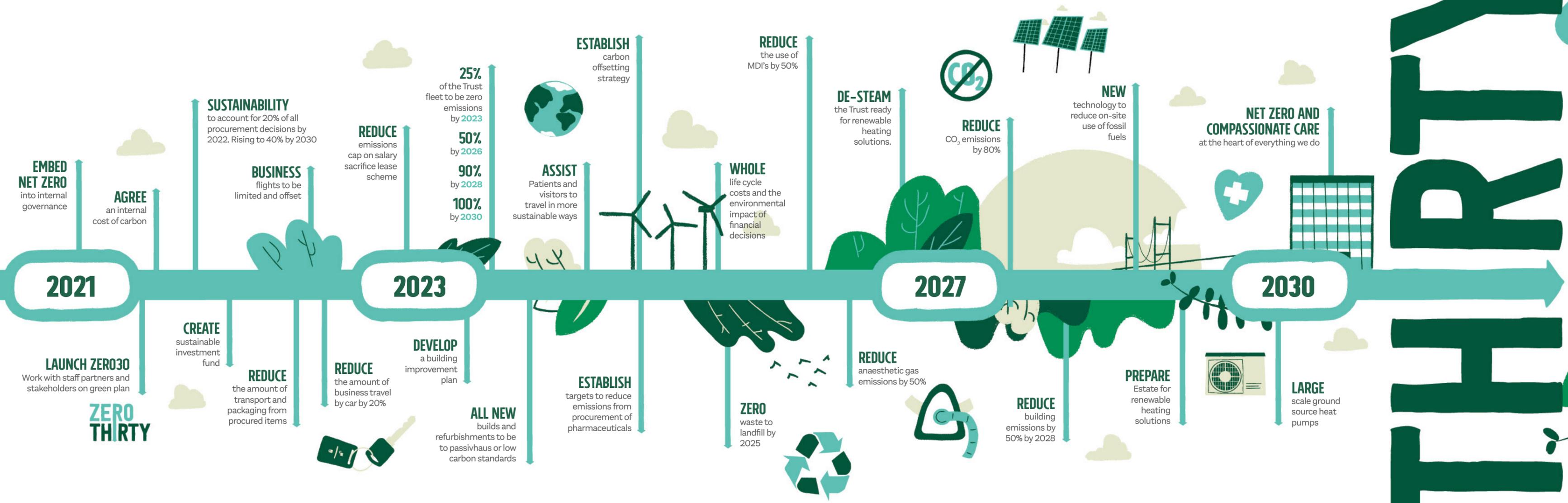
### HOW WE KNOW IT'S WORKING

- Staff performance development review
- Evaluation tools for zero:thirty
- Training provision

# ZERO THIRTY

# TIMELINE

# NET ZERO



# NET ZERO



WE THINK **ZERO**  
**THIRTY** IS POSSIBLE

WHY NOT HERE?

WHY NOT NOW?

WHY NOT US?



**“THE GREATEST THREAT TO OUR PLANET IS THE BELIEF  
THAT SOMEONE ELSE WILL SAVE IT.”**

**– ROBERT SWAN OBE, EXPLORER AND ENVIRONMENTALIST**

**GREEN PLAN:  
BECOMING NET  
ZERO BY 2030**

**ZERO  
THIRTY**