



St George's University Hospitals NHS Foundation Trust

The Green Plan

Enhancing the Environment, Protecting People, Cutting Costs

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Foreword

The NHS recently launched its commitment to delivering a 'Net Zero' Health Service, recognising that climate change poses a major threat to our health as well as our planet. The NHS recognises that the environment is changing, that change is accelerating, and this has direct and immediate consequences for our patients, the public and the NHS.

We at St George's are committed to delivering our contribution to the Net Zero plan and to adopt the broader principles of sustainable development. This Sustainable Development Green Plan (Green Plan) forms a key first step in helping us develop a sustainable healthcare strategy. Working in tandem with our new Estates Strategy it helps us to identify carbon, financial and waste savings as we look to grow and improve our estate.

This Green Plan outlines key work streams that will contribute to the continuous improvement of sustainability across St George's and set us on our way to Net Zero. It requires Trust-wide awareness and contributions to become a success. We owe it to future generations to ensure that we deliver this plan.

Andrew Asbury

Director of Estates & Facilities
St George's University Hospitals NHS Foundation Trust





1.0 Introduction

St George's is the **largest healthcare provider in South West London** with over 9,000 dedicated staff caring for patients around the clock. Our main site, St George's Hospital in Tooting, one of the country's principal teaching hospitals, is shared with St George's, University of London, and Kingston University which trains medical students and carries out advanced medical research. We also run the Wolfson Neuro-rehabilitation Centre, which cares for patients with neurological conditions, such as stroke and spinal injuries.

As well as acute hospital services, we provide a wide variety of specialist and community hospital-based care and a full range of community services to children, adults, older people and people with learning disabilities. These services are provided from St George's Hospital, Queen Mary's Hospital, four health clinics and other centres.

In 2019, UK net emissions of carbon dioxide were provisionally estimated to be **351.5 million tonnes (Mt)** with carbon dioxide (CO₂) accounting for **81% of total UK greenhouse gas emissions (GHG)** in 2019. NHS England now have firm commitments on being **net zero carbon by 2040** with an 80% reduction commitment by 2028 and is the world's first national health system to commit to becoming net zero carbon.

In accordance with the NHS **commitment to sustainable development** and long-term carbon emission reductions, the purpose of this document is to formulate St George's specific policies and actions to enable St George's to become a **national leader** in the delivery and provision of sustainable healthcare services.

St George's **Green Plan** sets out the national and local context of sustainability within the healthcare sector and presents a comprehensive overview of the drivers for the NHS and St George's to transition to a more sustainable future. The Plan also includes a sustainability vision for St George's.

As a result of the ongoing environmental, financial and health risks associated with climate change and the pressures of securing **long-term sustainable development**, St George's has produced a set of targets and tailored policies and actions. Where quantitative objectives cannot be set, commitments and areas of priority and improvement have been identified.

Our commitment is to ensure that we encourage and enable our staff to provide healthcare services in the most sustainable way possible. In conducting and developing its business, St George's has a responsibility to ensure that it does not impact negatively on local communities and the environment.

St George's has therefore directly addressed the ability to strategically improve the sustainable development of St George's across the following key areas: **Energy, Carbon, Sustainable Use of Materials, Capital Projects, Transport, Climate Change Adaption, Our People, Sustainable Care Models, Communication and Engagement, and Good Governance.**

This Plan sets out to establish and define:

- ✓ St George's vision for sustainability across our estate and operations;
- ✓ Our current status and areas for improvement;
- ✓ Sustainability commitments, objectives and priorities per workstream;
- ✓ The metrics needed to monitor and review the progress of the plan;
- ✓ Good governance with regards to accountability and delivery, and;
- ✓ A roadmap establishing St George's performance targets.

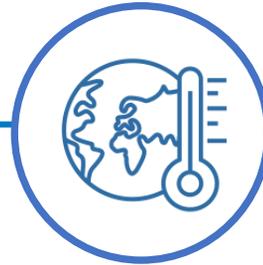


2.0 Drivers for Change



Legislation

- The Civil Contingencies Act (2004)
- The Climate Change Act (2008)
- The Equality Act (2010)
- The Health & Social Care Act (2012)
- The Social Value Act (2012)
- The London Plan (2021)
- The Environment Bill (pending 2021)
- Wandsworth Local Plan (pending 2023)
- NHS to become Net Zero Carbon (by 2040)
- UK Net Zero Carbon commitment (by 2050)



The Climate & Ecological Emergency

- Since 1970, 60% of the world's wild animals and 83% of river and lake wildlife have been lost.
- Across the past decade the UK has, on average, been 0.9°C warmer than the 1960s.
- All of the top 10 warmest years for the UK have occurred since 2002.
- There has been a 12% increase in rainfall with significant flooding events since 2010.
- The UK has an additional 9% of sunshine hours compared to 2010.



Demographic Trends

- Life expectancy at birth in the UK is 79.4 years (male) and 83.1 years (female).
- Over the last decade, the number of people diagnosed with melanoma (skin cancer) in the UK has increased by almost half.
- 67% of men and 50% of women are overweight or obese (2020).
- 67% of adults are considered to be active.
- 47% of children and young people meet the current physical activity guidelines.
- Over 400,000 people in the UK were admitted to hospital with COVID-19 between March 2020 and March 2021.



Cost Savings & Efficiency

- In 2018 the UK spent 9.8% of GDP on health.
- The NHS is one of the world's largest employers with approximately 1.1 million full-time equivalent staff in England.
- In 2019/2020, energy usage from all NHS estate energy sources amounted to 11.3 billion kWh.
- The total cost to invest in building restorations (backlog) was £9.0 billion in 2019/2020.
- The average cost of a patient being taken to Accident & Emergency (A&E) by ambulance is £252



3.0 Sustainable Development

3.1 What is Sustainable Development?

The most widely accepted definition is *“development that meets the needs of the present without compromising the ability of future generations to meet their own needs”* (The Brundtland Commission, 1989). Putting this into the context of the NHS, sustainable development must encompass commitment and ambition to meet the diverse needs of people in existing and future communities, promoting personal wellbeing social cohesion and inclusion, and creating equal opportunity for all. This includes understanding and addressing environmental, social and economic limitations and opportunities.

In recognition of the need to have a holistic and joined up approach to sustainable development, St George's acknowledge the importance of the United Nations Sustainable Development Goals. St George's also recognise our performance, actions and targets are now more important as we play our part in this Decade of Action.



Whilst we believe we can play our part in all of the above goals we have chosen to focus upon and prioritise six goals; **SDG3** Good Health and Wellbeing, **SDG5** Gender Equality, **SDG8** Decent Work and Economic Growth, **SDG11** Sustainable Cities and Communities, **SDG12** Responsible Consumption and Production, **SDG13** Climate Action, and **SDG17** Partnerships for the Goals.

3.2 Sustainable Development and St George's

St George's is **one of only two NHS trusts** to achieve sustainability accreditation with **The Planet Mark**, a certification programme which acknowledges continuous improvement in sustainability. The certification is renewed on an annual basis for organisations that achieve a minimum 2.5% reduction in carbon dioxide emissions.

Whilst many drivers behind the need and want for this Green Plan are covered in Section 2.0, it is important to acknowledge the interlinking nature of the NHS and sustainability. We play a crucial role in ensuring progress is made to minimise the impacts of environmental harm to individuals and local communities.

As an example, between **28,000 and 36,000 deaths a year** are attributed to long-term exposure to air pollution (Public Health England, 2019) which is also linked to the development of other health issues such as respiratory disease, the exacerbation of asthma, strokes, cancer, and coronary heart disease. Although the costs of air pollution to the NHS and social care in England are estimated to be £157 million, costs are anticipated to reach up to **£18.6 billion by 2025** unless action is taken (Imperial College London, 2018).

At St George's, we must not only prepare for the impact of environmental, social, and economic changes but play our part in reducing our own negative impacts by actioning sustainable ways to improve our buildings, infrastructure, procurement, and behaviours. We must not only adopt more sustainable behaviours, but encourage others to do the same.

3.2 The Triple Bottom Line

As a leading healthcare provider serving both London and the wider South West region, St George's acknowledges its multifaceted responsibilities to communities and the environment. In order to become a **national leader** in sustainable healthcare services, all strategies will seek to maximise the inter-related benefits and relationships between society, environmental preservation and economic viability. We will strive to share best practice methods amongst our stakeholders, operations, and estate strategy alongside opportunities to enhance the business case for investment in sustainable approaches to healthcare delivery.

St George's will therefore utilise the Green Plan as a framework for utilising a direct approach towards the holistic benefits of the '**Triple Bottom Line**' and will ensure that its associated positive impacts form part of St George's long-term strategic direction at all levels of decision-making and governance.

By addressing the aforementioned drivers for change we will future-proof our estate, services and partnerships whilst also improving staff wellbeing, reduce operating costs, and make better use of our collective resources.

3.3 Financial Costs & Resource Efficiency

St George's actively acknowledges that incorporating integrated resource efficiency measures across each division within St George's and improved compliancy measures with all energy and carbon management requirements can operate to secure long-term financial savings:

The financial implications for large Trusts such as St George's can be reduced as a result of increased sustainable development measures designed to enable:

- A **reduction in utilities expenditure** as a result of lower energy demands and an increase in the production of on-site renewable/low-carbon energy generation.
- A **reduction in financial penalties** resulting from failures to comply with legislative responsibilities relating to carbon and environmental management.
- A **reduction in over-spending on utility invoices** through regular benchmarking and detailed validation of electricity, gas and water invoices.
- A reduction in costs associated with **waste disposal** following increased rates of re-use and recycling.
- A reduction in costs of new buildings by prioritising the **maintenance and repair** of existing buildings.





4.0 Our Sustainability Vision

4.1 A Sustainable Vision for St George's

We endeavour to achieve excellent care, influence and performance in a sustainable manner. Both **people** and the **environment** are two of the world's most important resources and they each influence one another. It is our role to ensure that both people and the environment work in harmony with one another if we are to minimise negative environmental impacts and maximise a **positive, productive** and **healthy society**.

We have ensured that responsibility and accountability for Sustainable Development is clear at St George's and have developed this Green Plan to help **drive forward** St George's Sustainable Development Agenda. To us, being sustainable at St George's simply means:

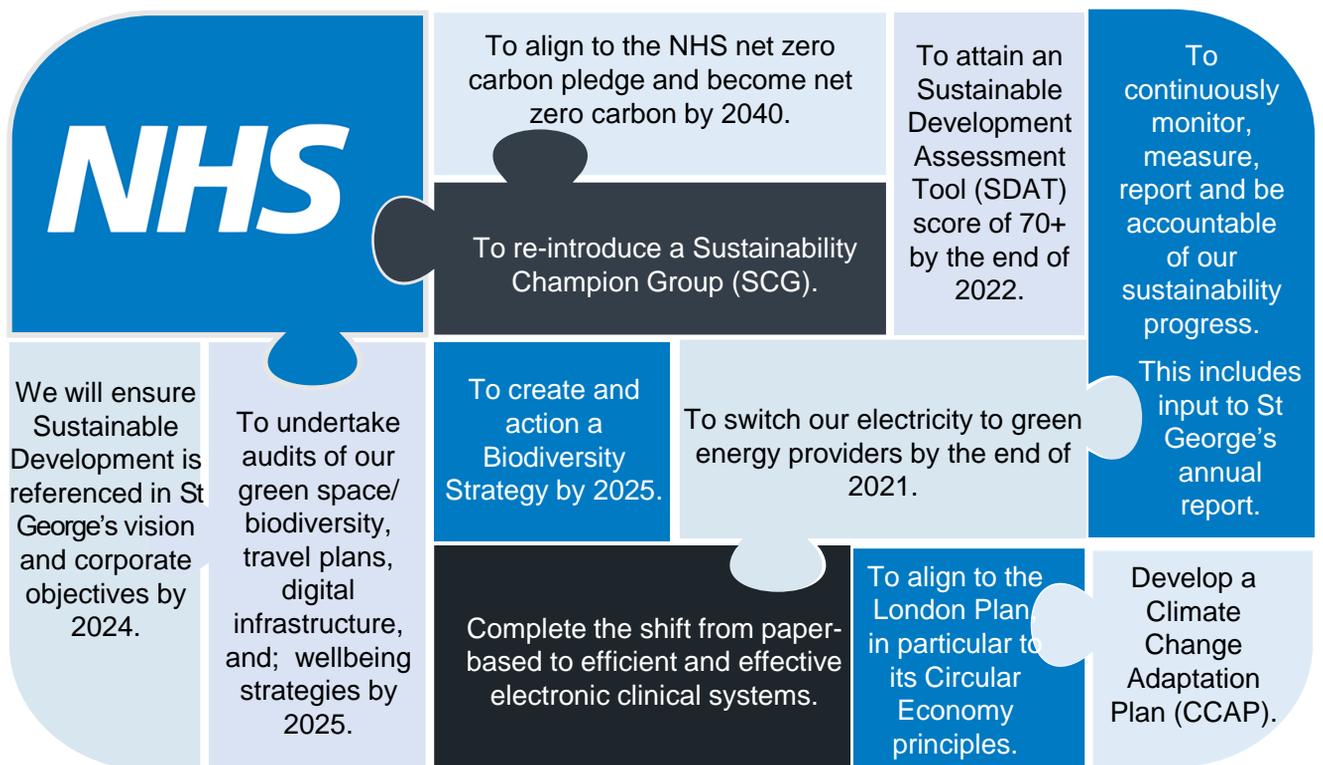
- Effectively managing our resources (including material, costs, people, and time);
- Having a positive impact on the environment, society and the economy; and
- Providing the best possible patient care through inclusion of a positive workplace environment and long-term financial sustainability.

While focusing on these key themes St George's has many cross cutting elements which also result in better patient care. These include the importance of integrating sustainability into our care services, encouraging and supporting self-care and linking sustainability and quality throughout our objectives. We believe that if we are to truly make a positive difference, we must embed sustainable behaviours into our workplace and partnership cultures so Sustainable Development becomes a **business as usual approach**.

4.2 Our Objectives & Targets

We are fully committed to this Green Plan and will support all stakeholders, both internal and external, in helping us to achieve these objectives.

A summary of our key commitments and targets is provided:





5.0 Carbon, Energy & Utilities

5.1 The Importance of Addressing Carbon and Building Efficiency:

The backdrop of humanmade climate change and the energy revolution it is driving presents challenges and opportunities for St George's. There is a combination of policy, legislation and technology that will affect St George's.

The UK has committed to be **"net zero" by 2050**. NHS England has committed to reducing direct CO₂ emissions **80% by 2028** and **100% by 2040**. Wider national legislation will mean new buildings from 2025 will need to be all-electric and no new fossil-fuel vehicles can be sold in the UK from 2030.

From the perspective of St George's there are several steps to this:



Energy efficiency is important as it reduces bills, emissions, and can create a more comfortable internal environment. LED lighting has been very successful in reducing lighting energy demand, but reducing heating demand has made less progress.



In **technology** terms the energy revolution is enabling the reduction to CO₂ emissions, energy bills and air pollution. A major trend is electrification. Switching to electrically driven vehicles and heating reduces CO₂ emissions greatly and improves air quality.



Heat is a major challenge for large health facilities. Switching away from natural gas to use electricity is the answer available today, with the possibility of hydrogen in the future. An issue is that electricity is expensive at the moment and where there are existing steam distribution systems they may need complete replacement. The use of gas combined heat and power (CHP) at St George's also presents a challenge as this is now a very high carbon system, which will be a challenge to replace.



The electrification agenda is also driving opportunities around **smart energy management**. With increasing electrical demand there is more benefit to moving when energy is used. By using electricity at different times, or using energy storage there can be substantial energy bill savings. As importantly, this can help reduce the peak electrical demand and the need to increase capacity agreements with the local electrical network. In most health facilities this is not being considered actively. In the future it will be crucial because of the increased electrical loads and more variable pricing driven by more intermittent renewable energy provision. It is positive that St George's is already exploring the use of batteries to reduce bills.



Renewable energy prices have fallen hugely and continue to do so. For St George's it is only solar power that is likely to be realistic. This can be used to provide a significant energy contribution with a reasonable payback period, whilst reducing CO₂ emissions. Additionally, the NHS net zero plan states that St George's should be procuring renewable energy by April 2021.

To meet the NHS England targets will require a combination of all of the above, and possibly investments outside St George's.

5.2 St George's Current Position

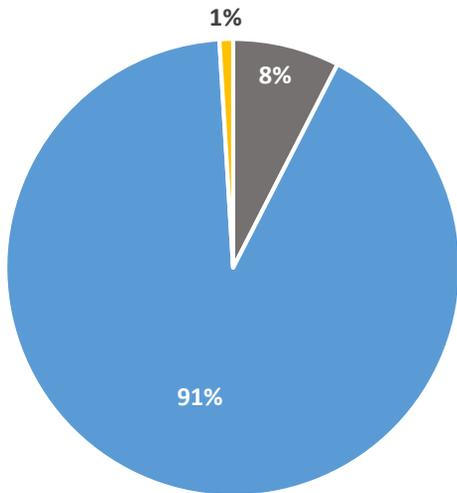
St George's imported **9.9 million kWh** of electricity from the grid during the 2019/20 financial year. The on-site CHP engines produced **35.6 million kWh** of electricity with St George's exporting **2.7 million kWh** during the same period. The site's natural gas consumption to produce steam, electricity and thermal energy for the site was **135 million kWh**.

The fuel associated costs for the year 2019/2020 are shown in the Figure to the right. **Gas consumption** as a source of energy generation for St George's is the highest with **66%** of the total cost. Grid **electricity consumption** comes second with **32%** of the total costs. **Oil** accounts for just **2%**. The oil consumption is mainly a result of statutory monthly testing for the various generators that are located on site.

This shows the intensive use and reliance on the site's CHPs and boilers. While the overall gas costs for the site are double the grid electricity costs, this is not the case for the carbon emissions deriving for the use of each fuel.

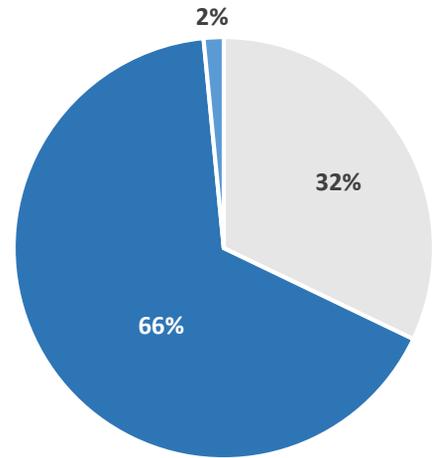
Natural gas emissions account for **more than 90%** of St George's emissions, as can be seen in the below Figure. Nonetheless, if the CHP was not producing steam, electricity and low temperature hot water for the site then the electricity costs and emissions would be much higher.

Carbon Intensity Emissions: (% of kg CO₂ e/kWh)



■ Grid Electricity ■ Natural Gas ■ Oil

Fuel associated costs: (%) 2019-2020

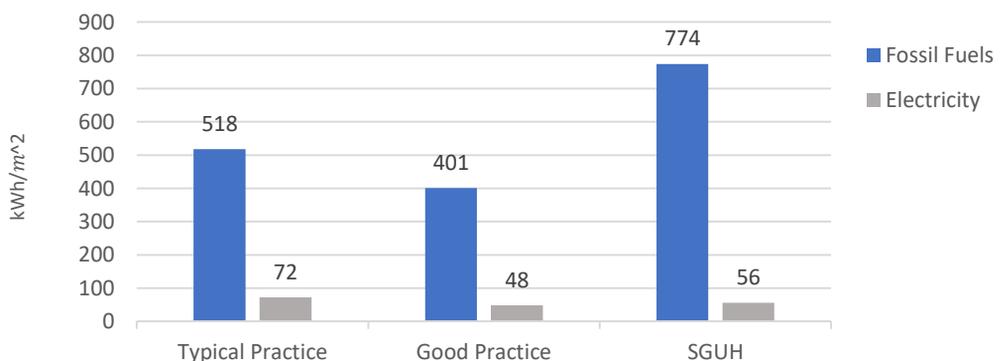


■ Grid electricity costs ■ Gas costs ■ Oil costs

The below graph compares the energy consumption benchmarks in kWh/m² per year for typical and good practice long stay hospitals, with the **energy consumption** for St George's for the year 2019-2020. Fossil fuel consumption (oil and gas) are **above typical practice** whereas electricity consumption is **worse than good practice but better than typical practice**.

The benchmarks are the **average annual energy** consumption from a range of different hospital buildings which may have different factors compared to St George's.

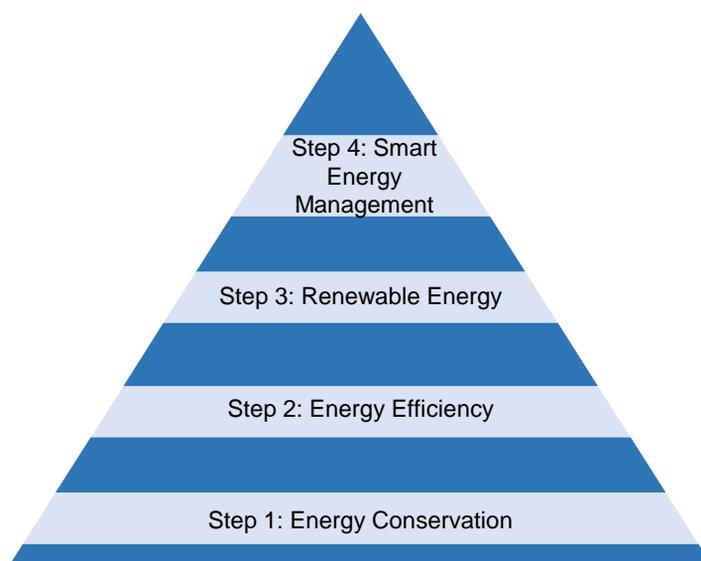
Energy consumption benchmarks comparisons:



5.3 St George's Targets and Key Considerations

St George's net-zero target should align with the **NHS England target of net zero carbon footprint by 2040**, and 80% reduction between 2028 to 2032.

In order to achieve net-zero for St George's the principles of the **energy pyramid** should be followed:



Energy Conservation

Energy conservation works by reducing the need for energy in the first instance.

Opportunities include:

Optimising the Building Management System (BMS)

St George's already has a BMS in place. It will be beneficial to review the setpoints, such as temperatures, and hours of operation to make sure they align with the operational hours of each building and make sure the temperature setpoints are correct. This is an easy way to gain energy and cost savings without the need of financial investment.

Centralised Data Management

The use of automatic smart meters is already in place however there is no centralised data management system. By having a centralised management system the measured data from all the meters and spaces could be incorporated in a single software system, allowing direct comparisons and observations about energy usage and flagging unusual consumption patterns. This will help to build and better understand the annual energy profile of St George's and make comparisons between different years especially after an energy saving measure has been applied.

Additionally, sub-meters would allow to monitor the energy usage of individual factors e.g. lighting consumption, and thus help identify and energy patterns within spaces.

Staff Engagement on Energy Conservation

Once these are in place a programme based on behavioural and operational practices to reducing carbon emissions across St George's should be put in place. By training staff on energy savings and optimal building usage significant energy use reductions are possible.

Seminars and workshops, along with staff incentives, like awards and prizes to promote sustainable behaviour may be components of a programme. Other Trusts have embarked on similar programmes and lessons can be learned from them.

Energy Efficiency and Fuel Selection

Energy efficiency programmes could look at a wide variety of opportunities; variable speed drives, new equipment, insulation, better controls etc.

LED lighting replacement – One of the fastest ways to achieve great energy savings is **LED light replacement**. Currently there is automated LED lighting in place, partially. The lighting replacement should extend to cover all areas and replace all non-LED lights with LEDs along with movement sensors. This will **reduce energy bills** substantially, and would greatly **reduce the carbon emissions** from St George's buildings and facilities.

Reducing Thermal Losses - St George's includes buildings of varying ages. **Fabric improvement** opportunities, particularly for older structures with increase of insulation in external walls/ roofs and floor are substantial. **Glazing improvements** will offer reduction of heat losses and help to reduce noise and condensation issues, with concomitant health benefits. Reduction in air permeability / improved air tightness would further reduce heat losses and achieve greater comfort levels (though this needs to be balanced with overheating risk and ensuring sufficient ventilation). The fabric first approach is in accordance with the energy pyramid as first the energy consumed needs to be reduced before reaching the renewables off-set.

The current steam distribution system is understood to be **leaky and inefficient**. As a programme of moving **away from natural gas** will be an important component of reducing CO₂ emissions, this should be combined with a programme to consider whether the steam distribution system can be replaced entirely (or partly), using low-temperature hot water. Where steam is used as the transport medium for providing heating or domestic hot water, these could switch to use Low Temperature Hot Water (LTHW) generated by low carbon heating forms, such as heat pumps.

Fuels - St George's understand that to be net zero they will need to move **away from the use of fossil fuels**. This mostly applies to natural gas, with a small amount of oil used for back-up systems.

Looking to the future, the main zero carbon fuels are expected to be electricity and hydrogen. Anything that can electrify, has a pathway to being zero carbon. The main issue is likely to be heating. If steam distribution is retained (and cannot switch the LTHW); there is the possibility to generate this via electricity in the short to medium term. Hydrogen could also be used to generate steam, but hydrogen is not expected to be available this decade. **By 2024 we aim to undertake a study of switching to all-electric.**

Existing CHPs - The existing CHP engines use most of the energy on-site in the form of gas. They will reach their end of life in about 11 to 12 years, and will need to be replaced or switched to zero carbon fuels, if St George's is to meet its goals. As part of the study recommended, St George's should focus on how the CHP engines are replaced or altered to be in line with the carbon reduction targets.

Renewable Energy

Solar Photovoltaics (PVs)

Photovoltaic means electricity from light, and the process converts free solar energy (the most abundant energy source on the planet) into direct current electricity.

Solar power is common in the NHS. It provides **zero carbon power**, reducing energy bills and CO₂ emissions. Space across St George's facilities should be analysed to see the scale of the opportunity and the solar should be deployed where practical and cost-effective. PVs can be placed on roofs or designated ground space.

Switch to Green Providers

There is an opportunity to switch to **green electricity providers**. These do not change the electricity provided to the site, but the supplier guarantees a % of electricity from **renewable sources**. Some green suppliers produce **100%** of their electricity from zero-carbon sources.

Additionally, many of these companies encourage app-based account management and may offer paperless billing by default which assists with the understanding, management, and future-planning of St George's energy.

St George's will switch to green energy providers **by the end of 2021 as per NHS net zero plan** to switch to renewable providers in 2021.

Smart Energy Management

As mentioned previously, the electrification of transport and increasing electrification of heat means that this is becoming the more dominant fuel of choice. Currently, electricity is relatively expensive compared to natural gas.

Electrical generation now has a much lower carbon output, with most electricity in the UK being sourced from **wind, nuclear** and **solar power**. This switch is positive, but these sources are less flexible than traditional thermal generation, meaning that electricity prices are **more variable** as the system seeks balance between supply and demand.

These variable electricity prices mean that it is beneficial to use it **smartly**, thus reducing demand, but also changing when it is used. Additionally, as the demand for electricity grows it may be necessary to upgrade the electrical connection for the sites. This will be costly, and the necessity or scale of upgrade may be reduced by the use of **smart energy management**.

St George's is already considering the use of batteries to reduce energy prices, and a full study for a **Smart Energy Management Plan** for St George's should be undertaken by 2025.

5.4 Other Key Considerations

St George's currently does not hold Display Energy Certificates (DEC) or Energy Performance Certificates (EPCs) for the buildings on-site. It is our understanding that:

Display Energy Certificate (DEC)

Public authorities must have a DEC for a building if all of the following aspects are true:

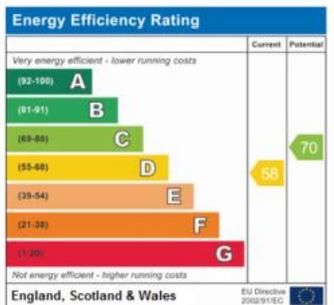
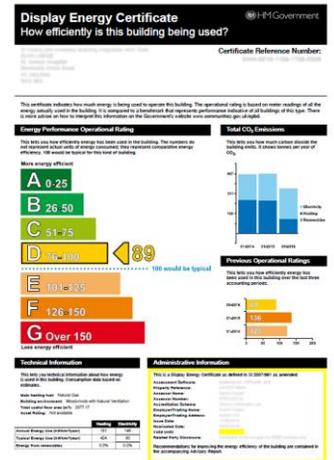
- It is at least partially occupied by a public authority (e.g. council, NHS Trust);
- It has a total floor area of over 250 square metres, and;
- It is frequently visited by the public.

We believe this will be the case for most buildings on site and thus a DEC should be required. Apart from a legislation requirement, a DEC can be used to **track St George's path towards net zero carbon** and displays the energy rating of each building. A DEC shows the **energy efficiency** of a building based on energy consumption over the previous 12 months and is also accompanied by an advisory report which includes recommendations for improving the energy efficiency of each building. Because these reports include site visits and data collection it will improve the understanding of each building and the assessor will be able to offer tailor made recommendations to improve energy efficiency.

It is therefore understood that St George's will need to instruct an authorised DEC assessor as soon as possible in order to attain a DEC.

Energy Performance Certificate (EPC)

Furthermore, in order to complete a lease or sale of a property an Energy Performance Certificate (EPC) is required by law. As of 1st April 2018, the minimum energy efficiency standard is set at an EPC rating of 'E' and will be enforced upon the granting of a new lease and the renewal of existing leases. If an EPC results in an F or G rating, then improvement works will be required to reach at least an E rating before completing a lease.





6.0 Sustainable Use of Resources

6.1 The Importance of Resource Efficiency

It has been estimated by that the NHS produces around **600,000 tonnes of waste each year** (BRE, 2021). Minimising the volume of waste consumed by St George's each year will not only have a positive environmental benefit, but also an economic one through a reduction in disposal costs. Reducing the volume of waste produced at St George's will reduce the volume of natural resources, water and energy required to make products and also result in **less pollution** and **contamination** arising from the disposal of waste.

National and regional legislation focussing on reducing waste and using resources sustainably includes:

- **A Green Future: Our 25 Year Plan to Improve the Environment (2020)**
 - The Plan outlines the principles of minimising waste, reusing materials, and managing materials at the end of their life to minimise their impact on the environment, including working towards **eliminating avoidable plastic waste by the end of 2042** and **zero avoidable waste by 2050**.
- **Our Waste, Our Resources: A Strategy for England (2018)**
 - The Strategy sets out how the Government will **preserve** the stock of material resources by **minimising waste**, **promoting resource efficiency** and moving towards a **Circular Economy**.
- **The London Plan (2021)**
 - The Plan sets out policy to **reduce waste** and support the Circular Economy, encouraging developments to be net zero waste. Additionally, it notes the importance of **conserving water** supplies, minimising leakage, and maintaining water supply infrastructure in a cost-effective way.

6.2 Key Considerations

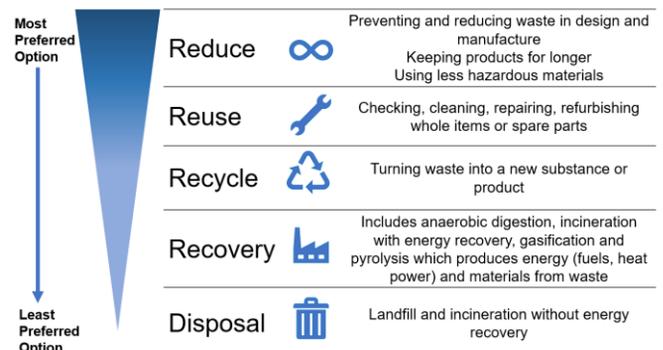
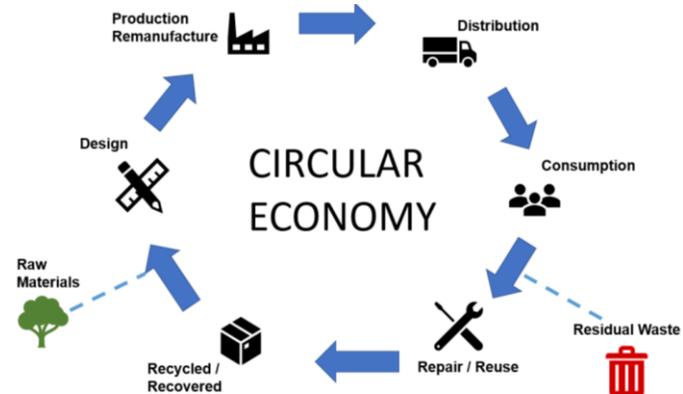
A **Circular Economy** aims to move away from the traditional model of 'make – use – dispose' towards a circular model that keeps resources in use for as long as possible. A Circular Economy is based on the principles of designing out waste and pollution, and keeping products and materials in use, and regenerating natural systems..

Water supplies are essential to any sustainable development and to the health and welfare of people. London's consumption of water already outstrips available supplies in dry years and ensuring a sustainable and **secure water supply** has to be an urgent priority.

The **Waste Hierarchy** requires avoidance of waste in the first instance, followed by reducing the volume that requires disposal after it has been generated. It gives order of preference for waste management, to minimise the volume of disposal.

Single Use Plastics

It has been estimated that in the UK, approximately five million tonnes of plastic are disposed of each year, with almost half of this being packaging.



Although plastics play an important role due to their versatility, they also have a number of negative impacts. For example, single use plastics are difficult to reuse or recycle, therefore often end up in landfill. They do not decompose, polluting the Earth's ecosystems, remaining in the natural environment for hundreds of years.

6.3 Current Waste Management at St George's

Between April 2020 and February 2021, approximately 17% of the total waste generated at St George's was sent for recycling, with a total of **98% being diverted from landfill**.

At present, the following waste types are segregated (*note that this does not include clinical waste, infectious waste, pharmaceutical waste, cytotoxic / cytostatic waste, sharps waste, offensive waste, infectious anatomical waste, or anatomical waste, as these are segregated and managed in the correct clinical way*):

- General waste
- Mixed recyclables
- Food Waste
- Cardboard
- Waste Electrical and Electronic Equipment (WEEE)
- Metal

St George's has a 'Waste Management Policy' which aims to encourage the **sustainable management of resources**, ensuring that where possible, waste is reduced, reused and recycled, to make staff aware of the actions needed to ensure that infectious clinical waste is separated from other waste types, that all such waste is correctly identified and that waste containers/receptacles are tagged to allow '**cradle to grave**' auditing of waste segregation and disposal. The key focus areas of the policy are:

1. Prevention
2. Segregation
3. Handling
4. Transportation
5. Disposal / recycling

Signage

Waste signage is provided in clinical areas, office areas and restaurants (see examples below). This provides information about what can and cannot be recycled to both staff and the public. In offices, St George's has moved away from individual bins, and now have central refuse and recycling stations in central locations to encourage segregation and recycling. St George's is exploring the opportunity to update the signage at waste stations to encourage staff and the public to recycle. Options to include relevant statistics (for example the carbon emissions of producing plastic) will be considered, as well as ensuring that a communication plan is developed to ensure staff are aware of the importance of recycling and placing waste into the correct bins.



Single Use Plastic (SUP) Pledge

NHS England and NHS Improvement have launched a **pledge** which required NHS Trusts to sign up and commit to **phasing out avoidable SUP** items which are used in catering services and office spaces. St George's have signed this pledge, with a focus on SUP items in canteens. St George's has made progress to provide alternatives and have replaced plastic cutlery with **biodegradable packaging** and **treated wood cutlery**. It should be noted that these are for takeaway meals only and are managed by staff at the tills.

St George's is looking into other opportunities to reduce SUP, which include:

- Installation of water filling stations to help reduce the number of plastic water bottles; and,
- Elimination of non disposable cups and investigating alternatives.

Although we are making progress in the restaurants, St George's recognises that improvements need to be made across other areas, such as offices and wards.

Paperless / Paper-lite

St George's does not have any policies in relation to paper use, however, St George's encourages staff not to print items unnecessarily. For example, *'Do you need to print this'* is included on emails to discourage staff from printing unnecessarily.

Additionally, St George's is moving towards paperless systems, with medical records being uploaded onto an electronic system, which involves all information being scanned and saved onto a hard drive. During the COVID-19 pandemic (particularly throughout 2020), there has been a change in staffs' behaviour which has resulted in less printing occurring due to more staff working from home and not having access to printing facilities.

Circular Economy Principles

St George's has a number of sustainable resource management strategies, which are helping them move towards a Circular Economy. These include:

- A **sewing room**, which is used to repair items such as old uniforms or curtains;
- **Recycling of uniforms** – for example, when an employee leaves St George's, they return their uniform, which is then washed and allocated to other staff.
- Going forward, St George's intends to use the **BREEAM methodology** in capital projects. This includes reclaiming all bricks, which are then reused or recycled.

Procurement

St George's advocates sustainability within their **supply chain** as demonstrated in the Procurement Policy. The policy considers economic sustainability recognising the importance of the local economy and social sustainability with aims to minimise carbon footprint. Equality and diversity free from discrimination is also included. Throughout the procurement process suppliers are required to demonstrate evidence of a **sustainable approach** and a **green review** is undertaken of sustainability credentials.

Staff Training

Currently there is no staff training in relation to waste management at St George's. In general, staffs' understanding on what can and cannot be recycled is dependent on their background knowledge, there is no mandatory training to educate staff.

6.4 Key Commitments

The following section highlights the key commitments that St George's should consider to encourage sustainable use of resources. To be in keeping with the Government's *A Green Future: Our 25 Year Plan to Improve the Environment (2018)* and *England's Our Waste, Our Resources: A Strategy for England*, St George's should:

- Aim to be zero avoidable waste by 2050;
- Look to eliminate avoidable plastic by 2042;
- Increase the recycling rate for municipal waste to 65% by 2035;
- Ensure that municipal waste sent to landfill is less than 10% by 2035;
- Increase the recycling rate of packaging to 75% by 2030; and
- Increase the recycling rate of St George's to 50% by 2025,

The introduction of a new **plastic packaging tax** will take place in April 2022, which will result in plastic packaging being taxed. Additionally, targets within the **UK Plastics Pact** are relevant to this impending tax, therefore St George's should work with suppliers to ensure that by 2025:

- Any unnecessary Single Use Plastic packaging is eliminated from the supply chain; and
- Plastic packaging contains at least 30% recycled plastic.

In addition to the targets set out above, St George's should establish and develop **partnerships** with charities / organisations to encourage reuse and repair of bulky items such as furniture. For example, St George's could use **Warp-it**⁵, which is an online company that help organisations distribute redundant items that could be reused or recycled including furniture, equipment, fixtures and fittings. This is currently already being used by a number of Trusts across the UK.

6.5 Opportunities for Improvement

Single Use Plastics



- Undertake a **Single Use Plastic Audit**, to establish the current volumes and types of plastics generated at St George's. Once it is identified where SUPs are generated, St George's should assess options to use environmental alternatives for the products, using the hierarchy of alternatives:
 - **Eliminate** where possible;
 - Use of **reusable alternatives**;
 - Use more sustainable materials from **renewable sources**;
 - Use materials with a **high recycling rate** (not including plastic), and;
 - Where plastic is necessary, aim for plastic materials that can be **fully recycled / re-used / repurposed**.

Communication with Staff



- Ensure that **training is mandatory**, for all new employees / staff. Additional refresher courses should also be provided to encourage waste segregation throughout St George's.
- Identify '**Sustainability Champions**' to encourage waste segregation and reduction.
- Education of staff is key - hold '**waste awareness**' days to encourage waste segregation, highlighting the environmental and economical benefits.
- Ensure that recycling / waste stations display **consistent** and **clear signage**, making sure that these are visible and provide sufficient size to store recycling.
- **Publish target and commitments externally**

Circular Economy



- **Product as a service**, which involves paying for the use of a product as opposed to buying the products themselves. The service provider keeps ownership of the products and is therefore responsible for maintenance, refurbishment and take-back at the end of life. Examples include lighting, carpets etc.
- **Stakeholder engagement** will help St George's move towards a more circular economy, this will help St George's move toward waste targets, as buy in from stakeholders, the supply chain, and senior level will help drive motivation and action.
- **Circular resource supplies**, ensuring that products that are procured by St George's are design for repair, reuse, recycling or recovery, to work for as long as possible.
- **Product life extension**, encouraging products to be purchased within the supply chain that are designed for long life, therefore minimising waste generation as products are not discarded as quickly.
- **Review the Procurement Policy**, identifying gaps where specific goals encompassing sustainability could be added as a requirement for suppliers to meet.

Water Conservation



- **Conduct a water audit** –The amount of water entering the site, leaving the site and the amount consumed. This basic calculation should provide an overview of costs, potential savings and areas of wastage. It will also highlight discrepancies, which will indicate leakage or other losses.
- **Leak detection** - Frequently inspect all fixtures and fittings to understand what maintenance and upgrades are needed.
- Consider **smart technology** such flow restrictors, non-concussive self-closing taps and sensor taps etc.



7.0 Capital Projects

7.1 Capital Projects and Sustainability

The built environment sector is the largest user of materials globally and within the UK, construction, demolition and excavation account for **60% of material use and waste generation** (UK Green Building Council, 2019). In London it consumes **400 million tonnes** of material each year and accounts for **48% of waste**. By transitioning to a circular economy, it is possible to change the way production, construction, use and recovery of materials are thought of within buildings to reduce environmental impacts. An opportunity exists to make environmental improvements within new and existing buildings through the implementation of circularity principles on current and future St George's projects across the Estate.

The **London Plan Policy S17** requires developments including existing buildings that meet certain criteria to submit a Circular Economy Statement detailing how all materials arising from demolition will be reused and/or recycled; how the design will reduce material demands and promote disassembly at end of life and the amount of waste the proposed design is expected to generate and how this will be managed in accordance with the waste hierarchy.

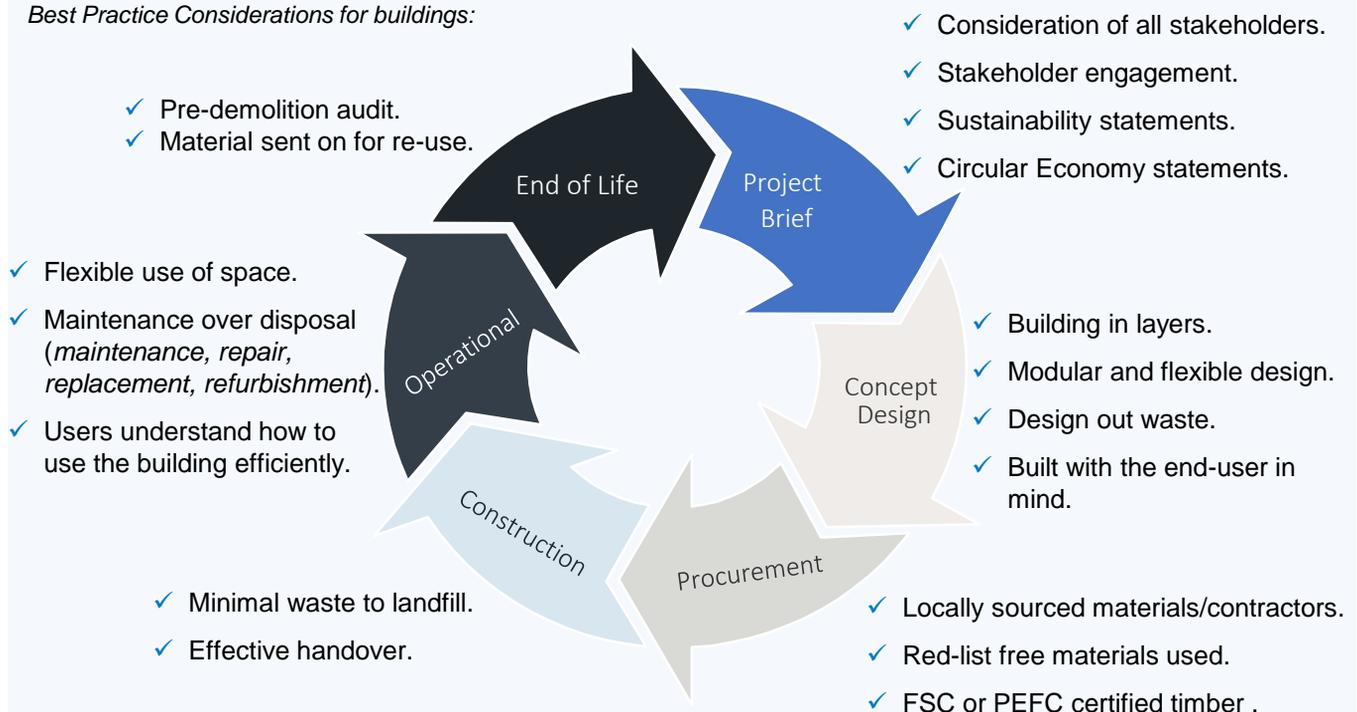
The success of a building's performance in terms of sustainability outcomes is dependent to a large degree on the decisions taken at the **design, procurement and construction stages of a development** (HTM-07). Relevant action is also required at post-completion, operational and end-of-life stages to ensure that buildings are used efficiently and sustainably, whilst providing social benefit and creating cost efficiencies.

7.2 Key Considerations

With any new development or refurbishment project, the **whole building's lifecycle** should be considered as this provides the opportunity to close the performance gap between designing an efficient and sustainable building and operating as one. The following factors should also be considered:

- The reuse of existing buildings as opposed to new build;
- Prioritising the reduction, re-use and recycling of materials;
- Ensuring building and infrastructure is socially accessible, and;
- Considering the use of brownfield land with a scope to improve the ecological value of green space.

Best Practice Considerations for buildings:



7.3 Capital Projects at St George's

Capital projects are a **crucial opportunity** to ensure that environmental, social, economic and sustainability benefits are taken into account when maintaining and improving the expansion, renovation, new construction, and replacement of existing facilities.

We understand that procurement of capital works should ensure that buildings, infrastructure and assets will be **fit for purpose** in a future changed climate. With this in mind, we take account of potential adaptation by planning for risks so that we can minimise the negative impacts of climate change and maximise opportunities which may arise. It is also our responsibility to play our part in reducing our impact on the environment, therefore we intend to ensure that the principles of sustainability and the Circular Economy are understood and developed in parallel with the governance, procurement, and development of capital projects.

St George's currently aligns the **common minimum standards for the procurement of built environments in the public sector** to ensure that project and programme procurement strategies take account of the Greening Government commitments and ensure that projects are designed to maximise efficiency, add value for money, and enhance positive impacts on biodiversity and impacts on staff, transport systems and local communities.

To ensure we **drive savings** and **improve efficiencies**, we also use the following frameworks:

- NHS Shared Business Services Framework (SBS)
- London Procurement Partnership (LPP)
- Crown Commercial Services (CCS)
- NHS construction procurement framework (Procure22)

Currently, St George's buildings are not accredited to **BREEAM**, however we recognise the importance of delivering the agenda through the design and build process. We do follow BREEAM methodology, however this is not yet formalised. Other examples of sustainability within our capital projects includes reusing and recycling materials from demolished or stripped out buildings and including sustainability and social value within our **tending process** (for example, asking tenders to confirm, demonstrate and evidence approaches to sustainability in project delivery (including environmental, social and economic elements)).

7.4 Key commitments

Capital Projects across St George's will align to the considerations set out in HTM 07 Environment and Sustainability; planning, design, construction and refurbishment and objectives described within this Green Plan. St George's will identify and implement sustainable resources and efficiency (including energy, water and waste), consider the use of sustainable and healthy materials, and redesign spaces and services to support the delivery of sustainable care models. Priorities will not only encompass current needs, but future needs.



As capital projects require approval by internal bodies, we will work to ensure this process ensures that all new developments and refurbishment projects are fully consistent at **national, regional** and **local levels** and consider sustainable development principles.



We will provide **Sustainability Statements** as part of our capital projects and in accordance with the London Plan will provide **Circular Economy Statements** to demonstrate how all materials arising from demolition and remediation works will be re-used and/or recycled, how the design of our projects will reduce material demands, explore opportunities for managing waste, ensure that waste storage and collection systems are easily accessible, and how the performance of these aspects will be monitored and reported.



The undertaking of new building and refurbishment projects will be a **collaborative exercise** involving St George's, local healthcare providers, the community, social services staff, local government, patients and visitors.



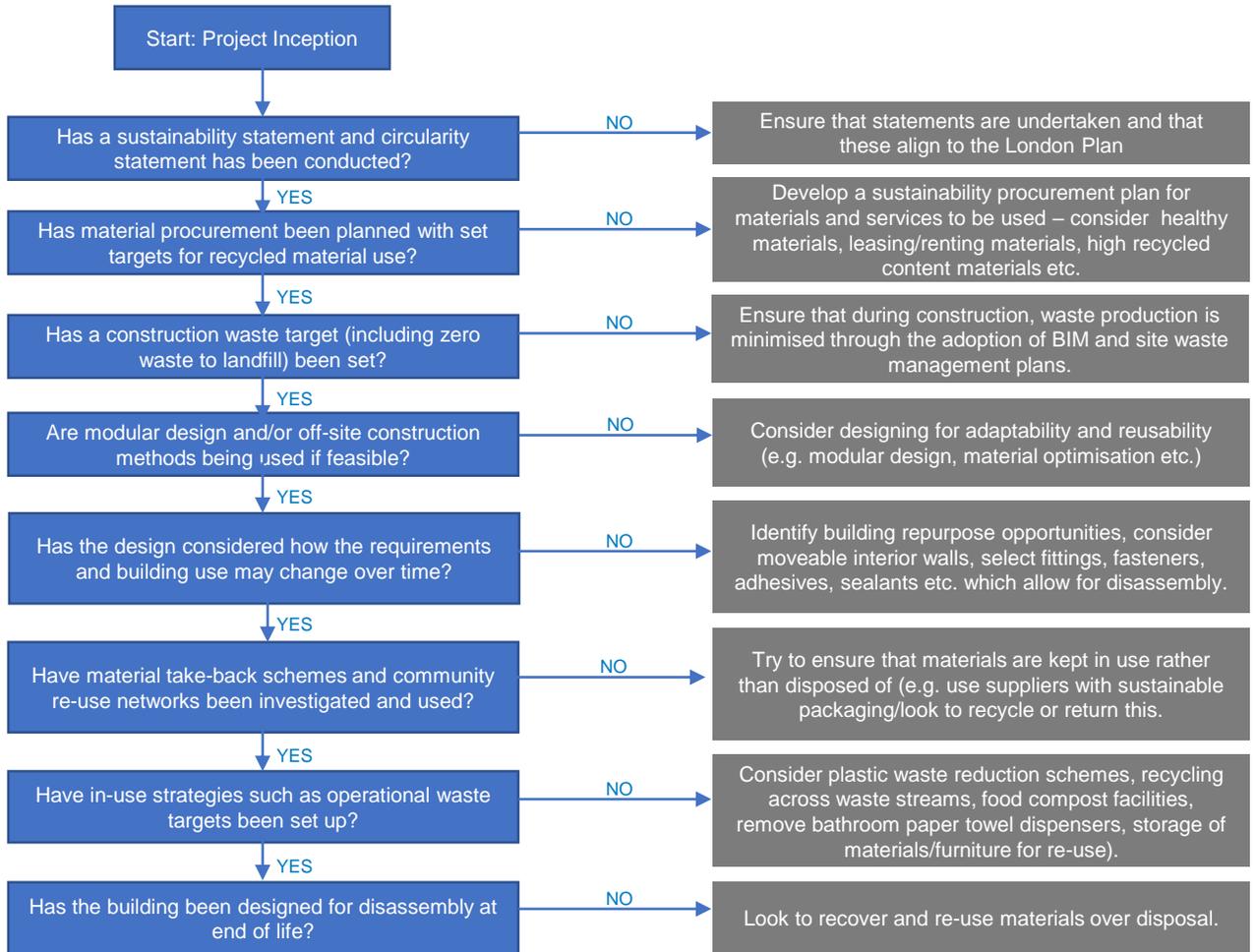
Soft Landings will be adopted for all projects to ensure that operational and building management considerations are considered at all stages of the project to improve the performance of the proposed building once occupied.



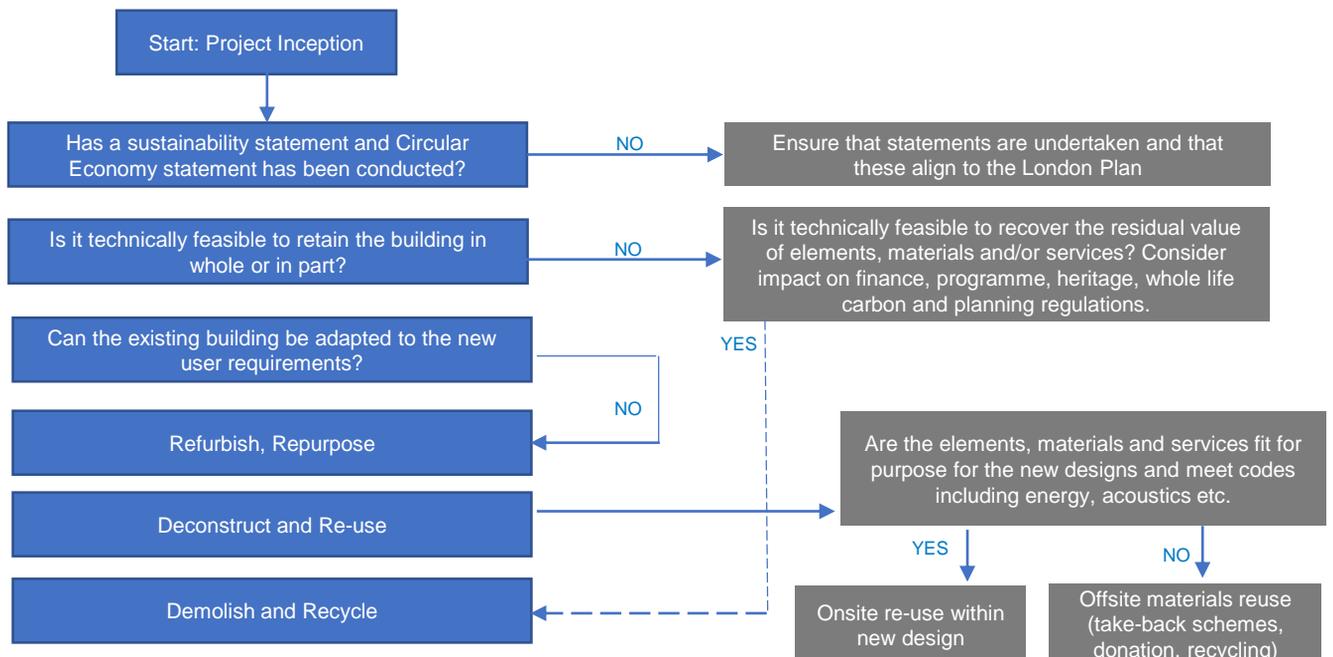
In accordance to the Government's common minimum standards, all new projects will achieve a **BREEAM** "excellent" rating and all refurbishment projects (in excess of £500k) are to achieve at least "very good" rating, unless site constraints or project objectives mean that this requirement conflicts with the obligation to achieve value for money.

In accordance with these key considerations and to formalise **good governance** of our capital projects, the below decision trees have been developed to ensure that project managers and design teams prioritise the **maintenance, refurbishment** and **retrofit** of existing buildings where possible, before building new. In circumstances where building new is the most feasible option, St George's will ensure sustainability is instilled, Circular Economy principles considered, and a formalised BREEAM methodology is chosen and documented.

New Buildings:



Existing Buildings:





8.0 Sustainable Travel & Logistics

8.1 The Importance of Sustainable Travel and Logistics

The digitisation of society is having significant implications for the transport sector with connected and **automated technologies, zero emission vehicles, shared service models** and new forms of **payment** affecting how people, goods and services move. Furthermore, the COVID-19 Pandemic has had a significant effect on mobility, bringing new trends and altering others. As an example, trends generated during the COVID-19 pandemic may result in a proportion of urban populations seeking to relocate to more smaller towns and rural areas. This is in contrast to previous trends of increasing urbanisation, particularly by younger demographics. It is unclear how these trends will settle when we move beyond the pandemic, but it can be expected that some remain to set a **'new normal'**. Examples of other current and emerging **megatrends** include:

The Department for Transport's **'Future of Mobility: Urban Strategy'** (2019) outlines the government's approach to maximising the benefits from transport innovation in cities and towns, summarising the **six high-level 'key changes'** that are fuelling the evolution of transport; **cleaner transport, new modes, data & connectivity, new business models, automation and changing attitudes.**

The UK's increasingly **ageing population** will have different transport needs and expectations, especially to locations like hospitals and GPs

Additionally, *fewer people* are undertaking physical activity and many are **suffering ill effects of an unhealthy, inactive lifestyle.**

As a direct effect of restrictions brought by the Pandemic, St George's has estimated that up to **75% of outpatient care is now delivered virtually**, whereas prior to the pandemic this was **below 10%.**

This has highlighted the impact of **'digital as a mode'** in providing new ways of accessing services to different user groups

The forthcoming **Transport Decarbonisation Plan (TDP)** will set out what government, business and society will need to do to deliver the significant emissions reduction needed to achieve net zero emissions by **2050**, by prioritising:

- Accelerating modal shift to public and active transport
- Decarbonisation of road vehicles
- Decarbonising how we get our goods
- Place-based solutions
- UK as a hub for green transport technology and innovation
- Reducing carbon in a global economy

In the UK, transport is the largest source of **carbon dioxide emissions, accounting for 34% in 2019.**

With that said, emerging trends away from diesel and petrol propulsion, led by a national Government plan to ban the selling of new petrol, diesel or hybrid cars by 2030, are **appearing in an attempt to reduce concentrations of the most harmful pollutants**

In London, the **Mayor's Transport Strategy** identifies an ambitious set of expected outcomes to be achieved by 2041, including:

- 80% of trips made by **walking, cycling and public transport**
- A 65% reduction in **people killed or seriously injured** by 2022 (against 2005-2009 levels), and a 70% reduction by 2030 (against 2010-2014 levels)
- A 10-15% reduction in overall traffic levels
- London's transport network will be on track to be **zero emission by 2050**

Many people are **increasingly happy to share assets and services** if it is convenient and the price is right, leading to increased shared mobility options such as car clubs, demand-responsive transport and other car-sharing services.

Urban freight strategies are increasingly exploring consolidation options and sustainable modes for last mile of a delivery.

How more sustainable delivery practices be incorporated into the hospital's operations? (for non-emergency/temperature dependent supplies)

Demand for parking spaces is expected to decrease and be replaced with greater use of active modes, public transport, vehicle sharing or other demand responsive transport options.

8.2 Travel and Logistics at St George's

St George's Travel Plan 2015 indicates an existing moderate active and public transport mode share, which the Green Plan can build upon. Mostly relating to staff travel, these are outlined below.

Mode of Travel:

- Based on a staff snapshot travel survey, of which 81% of respondents work at the Blackshaw Road Site, it was found that **25.8% travel to work by car, 13% by bus, 9% by train, 10.8% by London Underground, 7.3% cycle to work and 27.7% walk.**
- This means that 68% of respondents already use alternatives to the car to get to work.

Behaviour Change:

- 30% of staff live within 5km** (reasonable cycling radius) and 12% live within 2km (reasonable walking radius).
- 34% of car users** would or might consider changing to alternative modes.
- However, **37% consider it essential** to use a car to perform their role.
- 26% would be encouraged to cycle** if there were more changing facilities, and **19% if there was secure cycle parking.**

The Travel Plan for 2020 includes the following targets:

- To ensure that only those staff **requiring to use their cars** while at work are allocated a parking space.
- To **increase** the proportion of staff who **cycle to work** as their main mode of travel **by 25% points;**
- To increase the proportion of staff who use **public transport** to work as their main mode of travel by **10% points;** and
- To increase the proportion of staff who **walk** at some point during their journey to work by **10% points.**

Staff Travel Survey 2020

- A recent staff survey was conducted in 2020, which found that **over 50%** of St George's staff changed modes as a **result of the pandemic**, of those nearly **60% switched to driving.**
- It is noted that parking on site has been deregulated because of the pandemic, but with plans for the restrictions to be reintroduced.

Engagement with key members of the St George's revealed the following insights into the position of St George's with regards to travel and logistics:

- Anecdotal evidence suggests that demand for car parking is decreasing, with potential for parking demand to decrease further 'if' met with a strong package of alternatives and continued virtual consultations;
- A staff travel consultation group is due to launch;
- There is a need to consider St George's as a cross connection rather than always the destination, and that the site should also be welcoming to the public;
- There are plans for a dedicated cycle route through the site but this has not yet been constructed;
- The location of cycle facilities likely require greater strategic thinking in order to encourage uptake;
- There is a need for better collaboration with Wandsworth Council to link with their proposed active travel improvements;
- The two bus routes to/from St George's are not well used and are limited by severe congestion;
- Bus stops on site are located close to each other adding to congestion, and;
- First mile/last mile concerns from local railway stations.

8.3 Immediate Access to Site

Travel and Logistics do not exist in isolation, and as such it is worth considering the position of the wider transport network. High level examination indicates that some of the immediate access routes to the hospital, for example **Aldis Street** and **Maybury Street** leading into **Blackshaw Road**, are not pedestrian or cyclist friendly. Users and local residents have suggested that these routes 'do not feel particularly safe,' and "the cycle route is unattractive due to the on-street parking lines on both sides of the street."

In analysing the area surrounding St George's, particularly focusing on the major **north-south route of Tooting High Street**, following set of issues were identified:



General Issues:

- Very busy and congested;
- A high proportion of large vehicles in tight locations.



Pedestrian Issues:

- Difficult to cross, limited crossing provision forcing pedestrians to cross over cycle route and carriageway with no protection.



Cycling Issues:

- The route largely runs along a bus lane in the immediate area, creating conflicts between buses, pedestrians boarding/alighting, and cyclists;
- Idling, particularly from loading vehicles which also obstruct the route.



Public Transport Issues:

- Congestion limiting attractiveness and reliability of bus services;
- First mile/last mile limitations from rail and tube stations.

The second major northwest-southeast route is **Garratt Lane**, which presents the following, issues which were identified as part of an in-depth cycle study:

General Issues:



- High speeds in certain sections;
- Wide road which creates severance;
- Large amount of on-street parking in shopping areas;
- Tired public realm in shopping areas;
- Lack of public space, localised greening, identity, focus points for street activity and socialising



Active Travel Issues:

- Inconsistent treatment of side roads, with lack of raised entries and wide kerb;
- Lack of pedestrian and cycling priority across side roads and private accesses;
- Lack of wayfinding.



Pedestrian Issues:

- Varying surface quality and substandard widths;
- Lack of crossing facilities in shopping area.



Cycling Issues:

- Lack of dedicated cycle lanes/tracks;
- Bus lane operational hours create disconnected cycle provision;
- Lack of advanced green / separate stage for cyclists.

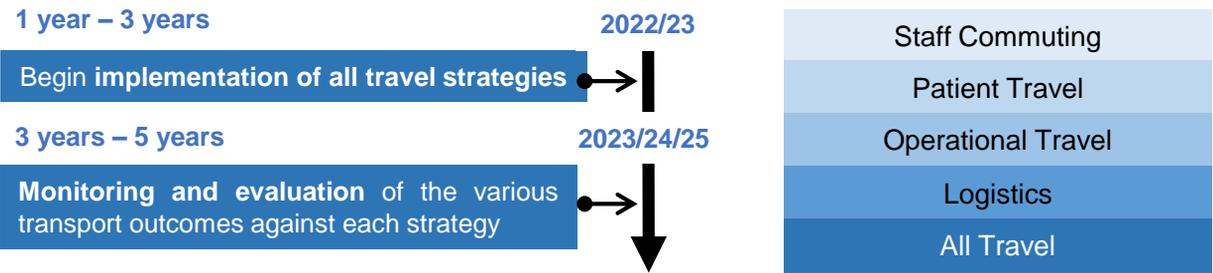
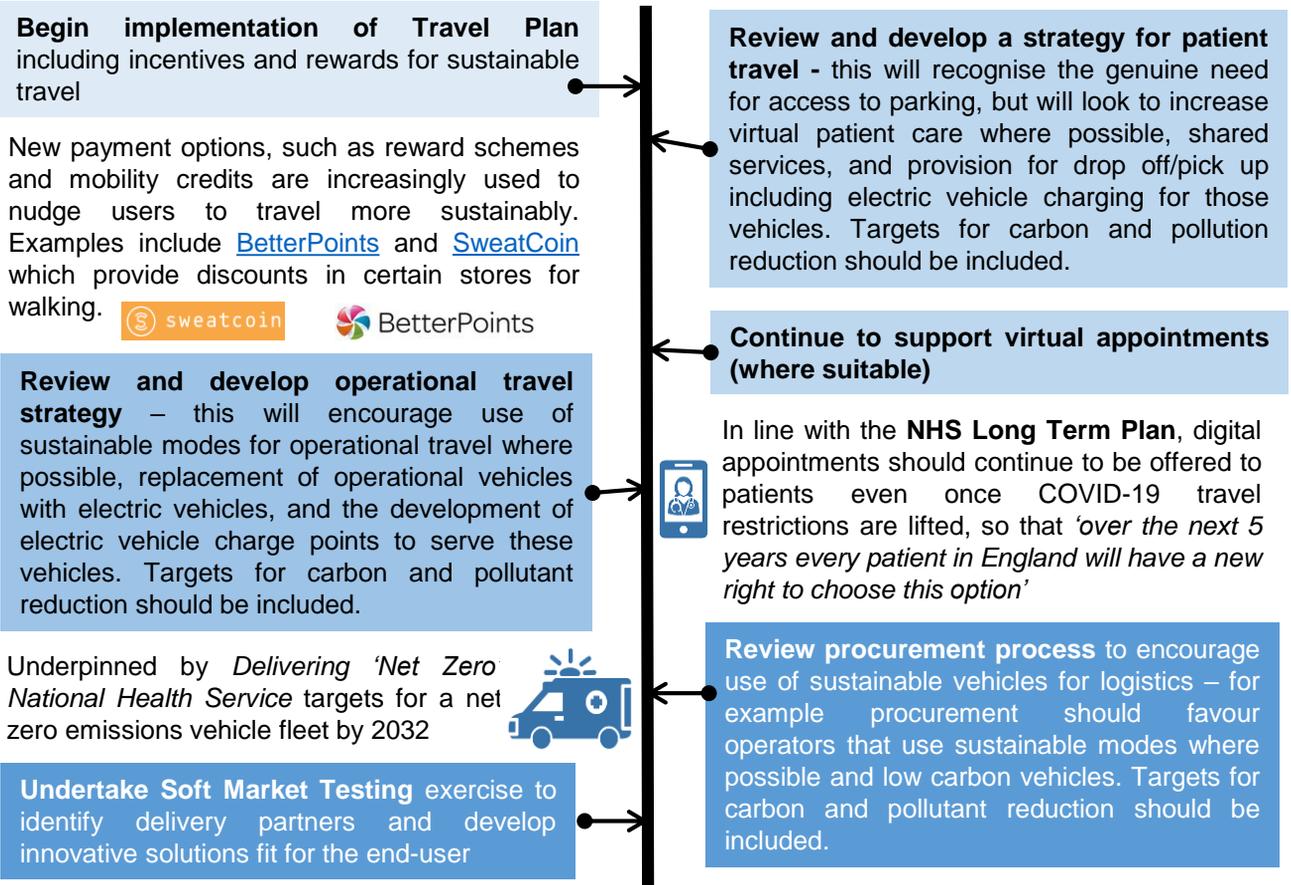
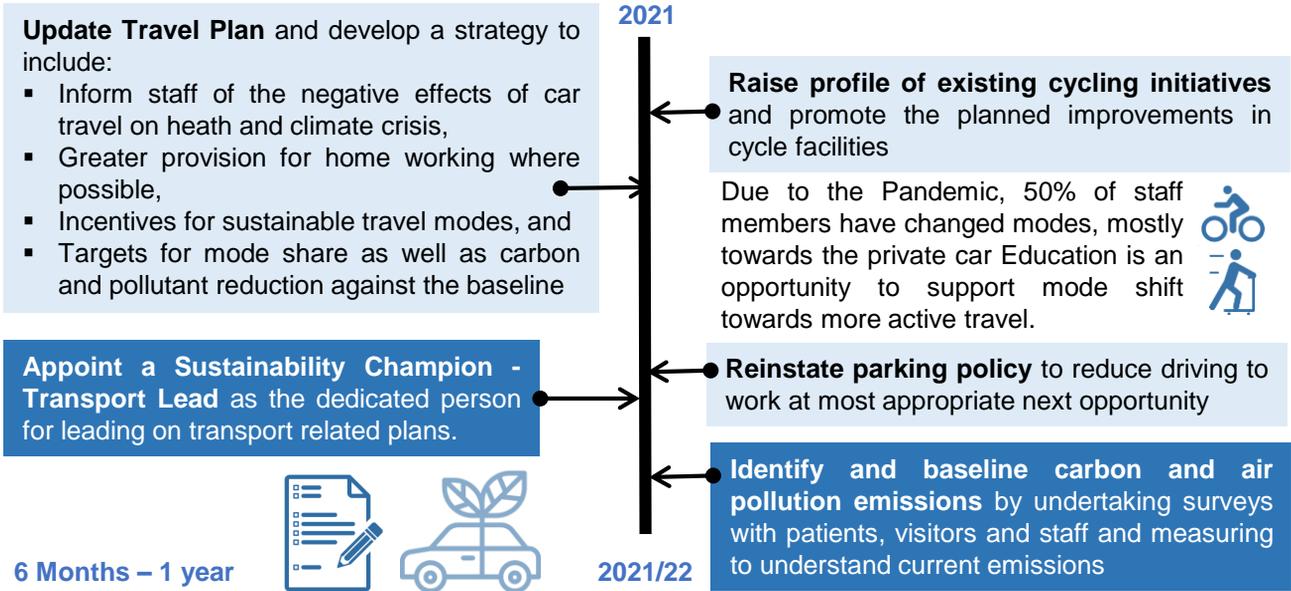


Public Transport Issues:

- Bus lanes only in operation 7-10am & 4-7pm (Mon-Sat);
- Bus speeds slow where no lanes provided.

8.4 Key Commitments and Targets

0-6 Months





9.0 Green Space and Biodiversity

9.1 The Importance of Biodiversity

Over the last half of the century, biodiversity has suffered a **68% decline globally** (Worldwide Fund, 2020) and **41% of biodiversity** indicator species in the UK have decreased in abundance (State of Nature, 2019). Biodiversity is important because it underpins the benefits humans get from Green Space and the wider natural environment. Biodiversity contributes to our health, wellbeing and economy whilst enriching the lives of those engaging with it. The UN sustainable development goals set out targets to reverse biodiversity loss, safeguard the natural environment and halt land degradation and include:



Actions to implement these goals involve decoupling economic growth from environmental degradation. To achieve this vision the value of biodiversity is being integrated into national and local planning processes by recognising ecosystem services as a foundation for sustainable development and human wellbeing.

National and local planning processes promote the consideration of mitigation for protected species and habitats impacted by development as a central theme for sustainable development. In recent years, the inclusion of **biodiversity net gain** (BNG) assessments to evidence a development's positive effect on biodiversity have become common. This driver had been in response to local planning policy requirements, however, it is expected that the upcoming Environment Bill will make securing positive effects to biodiversity a mandatory component of any developments subject to planning permission.

Both the **London Plan** and the **Wandsworth Local Plan** detail that Green Space and Biodiversity should be integral to design of new buildings and redevelopment. Where possible, Green Space should be designed and managed to achieve multiple benefits including human wellbeing, biodiversity, climate resilience, and sustainable drainage.

St George's will achieve benefits for Green Space and Biodiversity by implementing a Green Plan which has a vision for these four key areas:

Green Space Requirements

St George's has a history of strong engagement with its patients, staff and local community. Further understanding the green space needs of these people will promote biodiversity benefits to all.

Planning Policy

Development at St George's will require compliance with national and local planning legislation and policy. Meeting and exceeding these requirements is central to sustainable development.

Biophilic Design

Building and infrastructure design with co-benefits to user wellbeing through biodiversity is known as Biophilic Design. By considering biophilic design, functionality and wellbeing can co-occur.

Operational Efficiency

At St George's operational efficiency and biodiversity need to be considered in unison. Operational cost and waste reduction through the implementation of biophilic design and management is key.

9.2 The Green Space and Biodiversity Vision for St George's

The four key areas in the Green Space and Biodiversity vision for the St George's Green Plan are:

Green Space Requirements



The design of green space, its accessibility and the biodiversity value that underlies it at St George's should be linked to the needs of the patients, staff and local community that will engage with it. The vision for St George's is to understand needs of different groups which use the available green space. This will promote the efficient use of the available space in a way that balances user wellbeing with biodiversity value.

Planning Policy



Planning policy requires that the impacts of a development on protected species and habitats are measured and then mitigated when redeveloping St George's. These impacts often form part of a wider environmental impact assessment. St George's can meet planning requirements by: evidencing the provision of appropriate mitigation for impacts to protected biodiversity; and providing a BNG assessment.

Biophilic Design



Biophilic design promotes access to green space which can aid patient recovery by providing benefits to health that are not simply defined as being free from disease. St George's can provide benefits to the health and wellbeing of their staff, patients and local community whilst maintaining their primary function as a health care provider. To do so, St George's need to have a biophilic design which meets their specific needs.

Operational Efficiency



Reducing costs through operational efficiency can provide direct financial benefits to St George's. Increased operational efficiency may be realised through less intensive habitat management and reduced waste disposal. A vision to maintain a biophilic design whilst reducing costs can be achieved by defining a management plan for Green Space and Biodiversity at St George's.

9.3 Green Space and Biodiversity at St George's



St George's currently has a **diverse array of gardens and green space** which is managed to provide amenity and wellbeing benefits to patients and staff. The biodiversity features of value at St George's include:

- Different themed gardens and amenity areas;
- A variety of trees species of different ages which are being catalogued;
- Allotments;
- Bird boxes and nesting sites;
- Mammals such as foxes; and
- Invertebrates.

To achieve the greatest benefits for biodiversity as well as staff and patient wellbeing it will be necessary to understand the needs of these groups now and in the future.

From this understanding an St George's **Green Space and Biodiversity Strategy** should be written. This would be an operational strategy detailing the needs, design and management of Green Space and Biodiversity.

9.4 St George's Targets and Key Considerations

Green Space Requirements

St George's will create a **Green Space and Biodiversity Strategy** with staff, patient and local community biodiversity value and wellbeing at its centre.

This strategic plan would look to:

- Define biodiversity features at St George's which people perceive as valuable; and
- Identify existing biodiversity features in the local area that could connect with those at St George's.

Targets

- Consult patients and staff on what St George's and the local area's key biodiversity features are and how they are beneficial to their wellbeing.
- Write a Green Space and Biodiversity strategy to formalise the needs of St George's **by 2025**.

By creating a **Green Space and Biodiversity Strategy** for tailored green space requirements for patients, staff and the local community St George's will be contributing to UN Sustainability Goals **#15** Life on Land, **#6** Clean Water and Sanitation and **#3** Good Health and Wellbeing.



Look to understand whether there are any Green Space and Biodiversity **features** which could provide specific benefits to the care provided at St George's.

This goal would be closely linked to the clinical and wellbeing strategies for St George's. It represents an opportunity to **incorporate future needs** of patients and staff into a Green Space and Biodiversity strategy.

Targets

- Engage with staff about how Green Space and Biodiversity features could aid the care given at St George's.
- Define the future green space needs of St George's and incorporate them in the Green Space and Biodiversity strategy.

Planning Policy

St George's will aim to redevelop parts of their site in a way which evidences compliance with **biodiversity planning policy** in relation to protected species or habitats. In doing so it will be necessary for:

- The existing value of biodiversity on site to be appraised; and
- Any impacts to biodiversity on site appropriately mitigated by applying a biodiversity conscious design.

Targets

- Complete the cataloguing of trees at St George's.
- Engage local biodiversity stakeholders.
- Commission a preliminary ecological appraisal and ecological impact assessment for St George's redevelopment.

Implement biodiversity net gain assessment methodologies to insure that the Green Space and Biodiversity value at St George's is not diminished by any redevelopment. St George's may choose to pursue a BREEAM certified development methodology which look to promote sustainability in general but also have specific criteria and credits for biodiversity assessments.

Targets

- Produce a map of the current locations of gardens, trees, habitats and species at St George's.
- Produce a landscape design which provides a 10% biodiversity net gain for any redevelopment at St George's.

By measuring potential impacts to biodiversity and meeting the requirements for appropriate mitigation St George's will be contributing to UN Sustainability Goals **#15** Life on Land and **#6** Clean Water and Sanitation.



Biophilic Design

St George's will produce a **biophilic design** for the hospital which incorporates features which are in keeping with the St George's Green Space and Biodiversity strategy. This will look to protect biodiversity value which is perceived as valuable to staff, patients and the local community.

This biophilic design will also look to **increase access** to Green Space and Biodiversity so that benefits to wellbeing are achieved.

Targets

- Produce a **landscape design** at St George's which meets the needs provided by Green Space and Biodiversity strategy.
- Provide **twice yearly surveys** detailing the wellbeing of staff and patients and specifically how green space effects it.

Create a hospital which is **conscious of impacts** to ecology and biodiversity at all stages of development.

This could involve providing designs and processes which consider biodiversity during:

- Design** - Increase biodiversity value and access to green space;
- Construction** - Protect biodiversity value and promote sustainable materials ; and
- Operation** - Provide a management plan.

Targets

- Produce a **landscape design** at St George's which provides links to external green spaces (e.g. Wandle Regional Park, avenues of street trees or the nearby cemeteries) using appropriate signage.
- Produce a **biodiversity management plan**.

By providing a biophilic design which meets the green space requirements of the people that use St George's and complies with biodiversity policy St George's will be contributing to UN Sustainability Goals **#15** Life on Land, **#6** Clean Water and Sanitation and **#3** Good Health and Wellbeing.



Operational Efficiency

Create and implement a biodiversity management plan which details the required maintenance for the different Green Spaces at St George's. The biodiversity management plan would prioritise the maintenance of biodiversity value and therefore insure long-term benefits to wellbeing. The detail in the management plan should cover all important biodiversity features as defined in the Green Space and Biodiversity strategy.

Targets

- List St George's important biodiversity features (e.g. gardens & tree catalogue).
- Detail the management requirements of those biodiversity features for the next season, year and 5 year periods.

Look to find efficiencies in the management and sustainable use of water and waste at St George's. Wider sustainability strategies should look to incorporate water capture or waste recycling which can be used to maintain the green spaces.

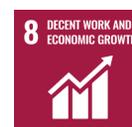
The intention is to reduce operational costs by:

- Increasing rainwater harvesting; and
- Generating compost for allotments and other habitats at St George's.

Targets

- Set up a rainwater harvesting system which can be used for St George's gardens and green spaces.
- Create a garden waste strategy that can provide compost to St George's allotments.

By creating a biodiversity management plan which increases operational efficiency, decreases waste and maximises biodiversity benefits St George's will be contributing to UN Sustainability Goals **#15** Life on Land, **#6** Clean Water and Sanitation, **#3** Good Health and Wellbeing and **#8** Decent Work and Economic Growth.





10.0 Climate Change Adaptation

10.1 Climate Change Considerations and Sustainability

According to the NHS Sustainable Development Unit (SDU) Adaptation Guidance, organisations are expected to consider three key actions:

1. Be part of **local planning** arrangements for adapting to climate change; **Understand the risks** of climate change and **develop appropriate action plans**, and; Report **progress** in St George's annual report

The below considerations are aligned to the UN SDGs and are also covered in the NHS Sustainable Development Assessment Tool (SDAT) designed to help NHS, health and care organisations understand their sustainable development progress. The indicators identified to direct the **St George's Green Plan Adaptation Vision** are presented below:

Governance and Policy

- Embed the effects of climate change in St George's **risk register**, in relation to clinical needs, types of clinical intervention, the quality of the estate and supporting infrastructure.
- Develop local protocols (aligned to national heat wave plans, cold weather plans and multiagency flood plans) as well as a **Climate Change Risk Assessment** (CCRA) to highlight risks to continuity and resilience of supply and review those annually.
- Involve representatives from sustainability, finance, estates management, emergency preparedness/planning, HR, business continuity and local partner organisations or communities to ensure a **co-ordinated and integrated adaptation plan**.

Procurement and Supply Chain

- Allow for Health Technical Memoranda (**HTM**) **compliant contingencies** for water/power shortages and supply chain failures to reduce the impact on the service delivery captured in the CCRA with mitigating measures.
- Ensure major suppliers and their supply chain have **resilience** and **contingencies measure** during any extreme weather events.

Core Responsibilities

- Assess **local climate change impacts** and prioritise actions/interventions, as well as conduct a flood risk assessment of the estate.
- Develop a **monitoring process** for overheating events (aligned to Estates Returns Information Collection (ERIC) reporting) and a rectification/implementation strategy to manage over heating risk especially in clinical and ward areas.
- Assess the **financial impacts** of climate change to the organisation and communicate the cost of doing nothing to the board.
- Ensure **vulnerable communities** and **vulnerable existing patients** are prioritised and supported in the event of major and extreme events.
- Equip the workforce with **training** on how to deal with different extreme weather scenarios.
- **Implement innovative/new technologies** that help improve the resilience, flexibility and adaptation our systems and infrastructure are implemented.
- Place an **Adaptation lead**, responsible for coordination of adaption planning, resilience and emergency preparedness, who will be supported with training, access to CPD events and local/national forums for sharing of best practice/innovation.
- Conduct **resilience test exercise** with main stakeholders and embedded learning outcomes to adaptation plans.

Working with patients, staff and local communities

- Engage with local stakeholders **in identifying climate risks** and review them using a recognised tool.
- Develop a **clear plan** to ensure vulnerable communities are supported during any extreme weather events.
- Assess the impact of the organisation's adaptation decisions on **local communities**.

10.2 Current Adaptation Measures at St George's

Governance and Policy

St George's has already developed local protocols, as well as **heatwave** and **cold weather plans** (which are updated annually) in relation to the Civil Contingencies Act, Climate Change Risk Assessment and National Adaptation Plan.

Key personnel are signed up to the **Met Office alerts** and any issue is escalated to the Estates team when appropriate. An **Emergency Preparedness Manager** is in place and arranges for St George's communication if Severe Weather Plans need to be activated.

St George's has in its future targets to develop a **CCRA** in line with **UK Climate Impacts Programme** (UKCIP) predictions to highlight risks to business continuity and resilience of supply, which will be followed by an annual review.

St George's also plans to develop a **Climate Change Adaptation Plan** (CCAP) which will be linked to this Green Plan and St George's planning processes and will be compliant with all legislative and Local Plan (**London Plan & Wandsworth Local Plan**) requirements in relation to climate change, carbon reductions and sustainability policies. St George's will ensure the outcomes of the CCAP are fed into **Health Economy Resilience Group (HERG)** and **Local Health Resilience Partnership (LHRP)**.



Procurement and Supply Chain

There are on site **"island mode"** generators, CHP and boreholes to reduce impacts from water and power shortages. Island mode operation relates to those power plants that **operate in isolation** from the national or local electricity distribution network.



Core Responsibilities

As described in the St George's heatwave and cold weather plans, all Medical and Nursing staff are aware of the identified high risk groups and St George's will endeavour to take all 'reasonably practicable' measures (ie. priority transfer to "cool rooms") to minimise the discomfort and risks to the health of patients, visitors and staff during extreme weather events. Additionally, **extreme weather protocols**, self regulating radiators (**TRVs**), daily temperature monitoring, as well as quarterly "communication tests" of the emergency notification system, "control centre exercise tests" taking place annually and "live exercise tests" which occur every three years.

St George's has a clear adaptation lead and a dedicated **Emergency Preparedness Resilience and Response (EPRR) Manager**, responsible for the coordination of adaptation planning, resilience and emergency preparedness.

St George's will ensure that a comprehensive **Flood Risk Assessment (FRA)** of the estate, access routes, supporting infrastructure and workforce is undertaken the next period based on the Wandsworth Multi-Agency Flood Plan.

Finally, St George's will develop a **'Summer / Winter Plan - Staff Awareness Programme'** issuing simple guidance and advice aimed at promoting no cost/low cost measures to minimise the impact of the hot weather.

Working with patients, staff and local communities

Regarding engagement with local stakeholders in identifying climate risks, St George's holds a membership of the **LHRP** and **HERG** in order to identify and assess any local impacts.



10.3 Key Commitments

St George's is committed to adapting to the impacts of climate change and there are actions in place to deliver a **sustainable** and **resilient healthcare system**.

Although there are actions already undertaken, the recommendations below are provided for inclusion into the St George's Green Plan in order to strengthen its adaptation strategy and contribute to the below UN Sustainability Goals:



Aims



- Provide more **natural ventilation** instead of air conditioning as heatwave temperatures become more frequent.
- Identify **cool spots** within buildings for patients and staff. Also consider use of trees, shade and other green infrastructure to provide cooling outdoors.
- Maximise the **quality** and **resilience** (i.e. through implementation of sustainable drainage systems) of the existing green space in the courtyards, to help manage **surface water drainage** and cope with rising temperatures and heat waves.
- Develop a **sustainability pledge** and reward scheme for staff.
- Where possible, request assurance from suppliers of fuel, water (and sewage), power and other key resources (e.g. medical gas supply, equipment etc.) that climate change risks are **accounted** and **planned for**.
- Assess **financial impacts** of climate change to the organisation and communicate the cost of doing nothing to the board.
- Develop and implement an **education** and **behaviour change programme** to ensure that all members of staff, patients and visitors are informed of the climate change risks associated severe weather conditions (i.e. Posters, workshops, training).

Commitments



- Develop a Climate Change Risk Assessment (CCRA) by 2024
- Develop a **Climate Change Adaptation Plan** (CCAP) by 2025.
- Receive energy from **renewable sources** by the end of 2021.
- Embed the effects of climate change into the St George's **risk register**.
- Install new and innovative **smart technology** to mitigate and monitor the environmental impacts, including local air pollution, flooding, heatwaves and cold weather. This could include frequent air quality monitoring with on-site equipment.



11.0 Our People

11.1 The importance of Health, Wellbeing and Sustainable Development

This chapter of the Green Plan advises on targets for **health and wellbeing** supported by St George's for staff and to encourage a supportive environment within St George's to provide positive impacts on each working individual. Although no consensus for a single definition of health and wellbeing, the following definitions have been considered:

The World Health Organisation (WHO) outline that **“health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”** However there is no consensus for a single definition.

The Centre for Disease Control simply state that **“wellbeing can be described as judging life positively and feeling good”** including physical wellbeing for the purposes of public health.

Whilst within the UN SDGs health and wellbeing is linked directly to sustainable development: **“ensuring healthy lives and promoting well-being at all ages is essential to sustainable development”**. Given the current circumstances, this Green Plan will adopt the UN SDG definition.

Currently, the world is facing a **global health crisis** unlike any other with COVID-19 spreading across cities, regions, and countries worldwide, thus resulting in human suffering, destabilisation of economies and huge pressures on the NHS and other global health services. More efforts are needed to fully eradicate a wide range of other diseases and address different persistent and emerging health issues. By focusing on providing more efficient services, improved sanitation and hygiene, and increased access to medical professions, significant progress can be made in helping to **save the lives of millions**.

However with this in mind, the health and wellbeing of staff is extremely important if we are to continue to work at such scale, tackling a global pandemic, whilst also trying to remain positive and productive. St George's are aware this is far from an easy task, however **we are committed to our people**.

Additionally, the emergence of **legislation and best practice guidance** should be considered:

UK Legislation

- Health and Social Care Act 2012
- Equality Act 2010
- National Policy Planning Framework (2019)



NICE

fitwel



Guidance

- NHS People Plan (2020)
- NHS Staff Council - Health Safety and Wellbeing of shift workers in healthcare environments (2020)
- NHS Workforce Health and Wellbeing Framework (2018)
- NICE quality standard - Healthy workplaces: improving employee mental and physical health and wellbeing [QS147] (2017)
- NICE guidelines – Workplace health: management practices [NG13] (2016)
- NICE quality standard - Physical activity: for NHS staff, patients and carers [QS84] (2015)
- NHS England - Guidance for NHS commissioners on equality and health inequalities legal duties (2015)

“Estimates from Public Health England put the cost to the NHS of staff absence due to poor health at £2.4bn a year”

NHS Employers Workforce Health and Wellbeing Framework (2018)

“Wellbeing is our business and our priority”

- The Our People Promise within the NHS People Plan (2020)

11.2 Health and Wellbeing at St George's

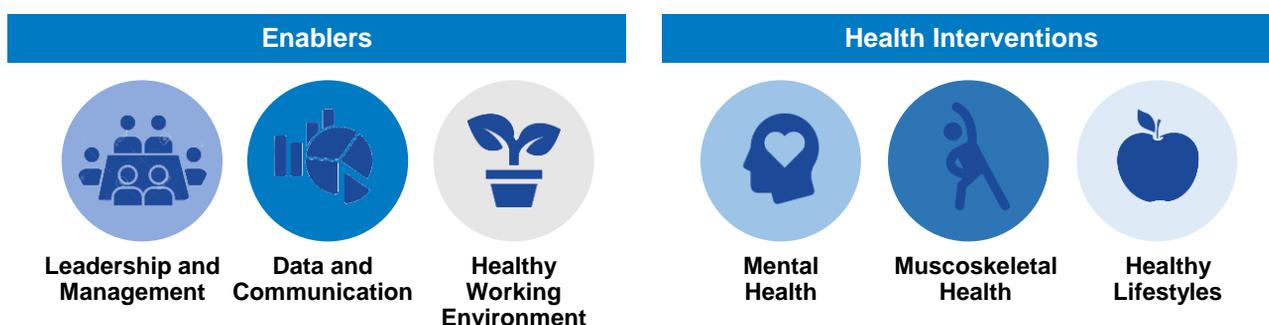
St George's already implements a range of health and wellbeing **initiatives** available to staff across all our sites, and **online** health and wellbeing resources that can be accessed at any time. This Green Plan will build upon these to identify further opportunities to enhance the health and wellbeing of their staff.

Staff at St George's also benefit from a range of existing initiatives provided by **NHS England** such as NHS discounts, the NHS pension scheme and psychological support services. UK government initiatives also include the Cycle-to-Work scheme.

Several **policies and plans** at St George's focus on health and wellbeing which include:

- Workforce Strategy 2019-2024 (2019)
- A Travel Plan for St. George's Hospital (2015)
- Food and Drink Strategy 2016-2019 (2016)
- Adult Nutrition and Hydration Policy 2019-2022 (2019)

The **NHS Employers Workforce Health and Wellbeing Framework (2018)** was produced in partnership with NHS Trusts, Voluntary Sectors and Government and consists of the sections below:



Taking into consideration this Framework, St George's promote health and wellbeing from leadership level initiatives to interventions for self-management which includes:

Enablers

- Implementation of the **Living Wage** for all staff;
- **“Listening into Action”** for service improvement;
- **Annual Staff Surveys** including wellbeing element;
- **“Freedom to speak up”** initiative providing a guardian to raise staff concerns;
- **Staff training** on mental health awareness, dementia and zero suicide;
- **“Culture Champions”** who work with St George's leadership to help improvements;
- Promotion of wellness, **“Wellness Week”** and guidance to support line managers advocate wellbeing;
- Mindful eating is promoted with a recommended 30 minute break;
- Bike to work events and the **London Cycle Challenge**;
- **St George's Hospital Charity** engaged to provide care packages across St George's ;
- Commitment to the Global Corporate programme **“Keeping Well at Work”** to tackle inequalities;
- Signage for **“Not every disability is visible”**, **“Culture is diversity”** and colour coordinated wayfinding system;
- Facilities including gardens, Quiet Zones and three **“Health and Wellbeing Hubs”** , and;
- **Healthy meal and snack options** available with detailed product content labelling and a traffic light system to inform healthy choices and events such as **“Nutrition and Hydration Week.”**

Health Interventions

- Staff support available for prevention and self management: clinical drop-ins, support groups, **1:1 Staff Counselling Service** available every day from 9am – 9pm, debriefs for staff who have experience traumatic event;
- **Schwartz Rounds** to enable staff to have conversations about the emotional impact of work;
- **Listening colleagues** to provide alternative support to managers;
- **Healthy lifestyle promotion** (e.g. Bicycle User Group, mindfulness and yoga sessions available on-site);
- **Sports and leisure facilities available** to staff include the Robert Lowe Sports Centre (multi-gym, squash courts, an all-purpose sports hall and climbing wall) which offers staff subscriptions. Tooting Leisure Centre (swimming pool, steam room, large modern equipped gym, sports hall and various classes and clubs) is also within walking distance. Discount for staff is available at Virgin Active;
- A range of staff **residential accommodation** for individuals and families within 1 mile of the hospital;
- A broad range of learning and development opportunities including training programmes, e-learning, simulation and work based learning. The learning environment is supported by a number of staff and organisations and promotes the delivering of Continuing Professional Development; and
- St George's is also an **Advanced Patient Simulation** and Skills Centre providing a variety of simulation training for more than 4,000 healthy professional annually, as well as an on-site Medical School and Faculty.

St George's have identified future improvements for health and wellbeing for their staff. In response to COVID-19 St George's has also anticipated a higher need for mental health services and aims to increase staff engagement with health and wellbeing resources. Future improvements include:

REACT Mental Health® conversation training: Training for Trainers (April 2021)

Intensive Care Society courses for ICU Staff (April 2021)

Managing insomnia course (May 2021)

Menopause cafes & training (June 2021)

Wellbeing e-learning courses (May 2021)

IAPT psychoeducational sessions with Wandsworth IAPT Service (May 2021)



11.3 Key Commitments

The NHS Employers Workforce Health and Wellbeing Framework (2018) underpins the below targets and each one has an aspiration to be achieved or implemented **by 2025**. The targets embrace St George's objective to **provide a healthy workplace and promote wellbeing for all staff**.

These include the continuation and improvement of previously mentioned enablers and health interventions.

We commit to:

Audits/Assessments



- Undertaking an audit with the facilities team of the existing staff facilities to formally identify what provisions do/do not need upgrading.
- Identifying existing suppliers of food and drink and when contracts are due to expire, look to incorporate requirements for healthy choices such as limited sugar content and whole grain options.
- Including nutritional standards within tenders and increased availability of healthy options.
- Outlining the use of non-emitting or low Volatile Organic Compound (VOC) materials and products where possible.

Communications



- Undertaking bi-annual training surveys to understand how effective the outcomes are for staff awareness of mental health, musculoskeletal health and healthy lifestyles.
- A Communication Plan will be designed including: promotional content within staff bulletins, the intranet and awareness with the leadership and management team.
- Improving our signposting procedures for staff to find resources, quiet zones and other health and wellbeing aspects (i.e. mental health first aiders, dementia friendly trained staff etc.)

Monitoring/Measurement



- Planning to develop a platform to monitor thermal conditions frequently.
- Aiming to monitor the air quality of all regularly occupied spaces for at least 2 of the following pollutants: a. Particle count (resolution 35,000 counts per m³ or particle mass; b. Carbon dioxide (resolution 25 ppm or finer); c. Ozone (resolution 10 ppb or finer).
- Providing an Internal Air Quality (IAQ) plan for construction of any new buildings to ensure good air quality during construction.
- Re-evaluating the targets set within the plan by 2023.

Resources/Provisions



- Reviewing the existing resources available to support line managers on mental health resilience and identify any gaps.
- Providing a working environment separate from the ward to improve the wellbeing of staff.
- Forming a partnership with a nutritionist or, where relevant, weight loss provider for staff.
- Considering Fitwel Standards for future building developments including daylight, dimmable light switches, Seasonal Affective Disorder (SAD) lighting, sound masking, improved access to nature and comfortable furniture.



12.0 Sustainable Care Models

12.1 The importance of Sustainable Care Models?

Sustainable Care Models is a particularly important aspect when considered alongside the pillars of social sustainability and economic sustainability to ensure that we are delivering the best care and outcome for patients in a **financially suitable** and **sustainable manner**. Coincidentally, it is also important when considered in the context of environmental sustainability as we must ensure we are efficiently and effectively making the best use of our resources and infrastructure whilst also future-proofing our models for the impacts of climate change. It is imperative that we understand whether our services are **fit for both now and for the future**.

Sustainable models of care stretch across **organisational boundaries** and look acutely at the co-benefits of **transformative care delivery** e.g. telemedicine, which can provide face-to face consultation for follow up appointments with no need for the patient to travel to the hospital which can also reduce waiting time pressures, the need for patients to travel to a hospital (which may not be local to them), site congestion and local air pollution, and enables doctors to spend more time treating more complex issues with patients.

Sustainable Care Models are more important now more than ever. The response to the COVID-19 pandemic has seen significant changes in how care services are delivered and used. Many of these **'service shifts'** have now been incorporated into an important redesign of services, with implications for **both staff and patients**.

Service shifts have affected the whole care pathway. This includes changes to the promotion of health and wellbeing in addition to support for vulnerable people and communities. Examples include remote consultations; new ways of receiving emergency and mental health services; and new partnerships across the health and care system. A model for **sustainable change** will need to bring together different factors to maintain new ways of working.

This is particularly the case for the use of **digital solutions** which are playing an increasingly important role in healthcare.

In the UK, NHS Trusts are reflecting this in their spending despite a challenging financial environment. In the last decade, UK capital spending in healthcare has been **below the OECD average**, falling as a percentage of GDP, and NHS Trusts have seen significant fluctuation in capital budgets. Despite those relatively low levels of funding and significant fluctuation, capital spending on IT and intangible assets (mostly software licenses) has steadily grown. However, at St George's in recent years spending on IT has been below average, which has also resulted in being one of the **biggest barriers to conducting research** (as noted in our Digital Strategy 2020-2024).

With the Health Foundation's (2020) sustainable change model in mind, this section will focus upon:

- Future-proofing our care models;
- Partnerships and Education, and;
- Digital Infrastructure.

A high level model for sustainable change (The Health Foundation, 2020)



12.2 Future-Proofing our Care Models

Our staff continue to develop a **culture of continuous improvement** where staff are empowered to identify issues in their own area of work and are skilled to make improvements that enable them to provide better and safer care for patients. Our experience, supported by our colleagues in the Institute of Health Innovation, is that we will best achieve this by continuing to use a simple yet effective improvement model to bring about changes. Our method for improvement is simple – **plan, do, study, act (PDSA)**.

Quality is at the heart of St George's Strategy '**Delivering outstanding care every time**' and by 2024 St George's will be an outstanding Trust delivering the best experience and outcomes for patients, with happy staff who are fully equipped to provide high quality and safe services, within a culture of continuous quality and safety improvement.

12.3 Partnerships and Education

St George's wants everyone who visits the St George's sites to feel that the care and treatment they receive is the best. To drive and support inclusive patient and carer engagement across St George's, we have a Patient Partnership and Engagement strategy which is part of St George's Quality and Safety strategy. The aim of this is to improve services and provide the patient's perspective. To this end, the **Patient Partnership and Experience Group (PPEG)** works in partnership with St George's and anyone over 18 who has been a patient or other visitor at St George's or who lives locally can apply to join us as a Patient Partner.

The PPEG has two aims: **Active patient involvement** and to **monitor the actions** taken in response to addressing issues identified by patients. The group works closely with relevant stakeholders including patients, carers and family members, clinical, managerial and academic staff, St George's members, local organisations representing patients, relevant voluntary organisations and St George's Governors and conducts regular evaluation of our work to ensure we are delivering on these commitments.

Since 2011, St George's is also part of **The Wandsworth Crime and Disorder Reduction Partnership (CDRP)** which aims to improve the safety of local residents and reduce the burden on St George's emergency department. This involves helping local police 'fill in the blanks' of assault crimes and is vital in helping the CDRP build a better picture of violent crimes committed in Wandsworth as a large number of cases treated in A&E are not reported to, or recorded by the police. They will then target areas where crime is more prevalent, or where there is an emerging trend in certain types of crimes or weapons used.

Finally, education and research is central to what we do at St George's. We are fortunate in working in close partnership with **St George's, University of London**, the only dedicated healthcare university in the UK and also work closely with **Kingston University** and other institutions to host clinical teaching programmes.

12.4 Digital Infrastructure

St George's is currently developing a range of corporate strategies which also need to be reflected in the Sustainable Care Models chapter of this Green Plan which includes emphasis on **research, workforce, quality, education** and **outpatients**.

St George's is committed to building a more flexible working environment, better use of data and electronic systems to improve quality of care and to provide education in innovative ways through better use of technology. Additionally, there are plans to enhance virtual triage and improve referrals and phone clinics. This is designed to deliver against the national ambition to **reduce face-to-face attendances by 33%**.

Staff have worked well to move away from heavily outsourced approach and have grown in their capability to use Information Technology (IT). Additionally, St George's is undertaking a shift from paper to electronic systems in inpatient and some outpatient areas.

There are opportunities for improvement such as the **upgrading of non-clinical systems** (email system has limited capacity and could be made more secure), more utilisation of **Microsoft Office functionalities**, and **communications and telephony improvements** are needed. There is limited virtual multidisciplinary team (vMDT) and fragmented use of apps for communication between clinicians. Finally, there is a risk that if St George's systems do not support appropriate sharing of information/referrals with tertiary networks (Surrey, Sussex, Cancer Alliance) that work could come under threat.

12.5 Key Sustainable Care Models Commitments

Achieving **long-term financial sustainability** of our health and care system and making the best use of our total resources is critical to this plan. We will need to deliver **transformational change** while managing increasing demand for services, inflationary pressures and the growing needs of an ageing population. This will require a **short, medium and long-term focus** on sustainability and value of services alongside reform following the COVID-19 pandemic.

It is crucial that this plan does not remain a simple statement of intent, but a **continuing process** of monitoring, challenge and review. Every component of the plan will continue to be tested for its fit with our strategic aims and we will continue to challenge expected levels of investment and levels of efficiencies in local, regional and national plans to ensure delivery of the aims of the delivery plan.

By 2024 we will undertake a review of our **approach to digital health, use of data and intelligence** and will ensure that our **new Digital Strategy** includes the digitalisation of our care models to support a digitally-active population, a digitally-enabled workforce, health and social care integration, whole-system intelligence and sustainable care delivery.

By the end of 2024, we will have completed an **audit of our digital infrastructure** to understand what improvements are necessary for us to meet our digital goals in parallel with our sustainable care principles.

By 2025, we will complete the **shift from paper-based** to efficient and effective electronic clinical systems.

This chapter considers three areas of priority for sustainable care models at St George's:

Future-Proofing



- To continue to work to reduce secondary care admissions with more services being delivered close to home in primary or community settings.
- To continue to focus on prevention and early intervention measures to ensure that our populations stay as healthy as possible for as long as possible and are cared for within the community if required.

Partnerships



- To work with local authorities and other key partners to plan and commission integrated services.
- To continue working in close partnership with St George's, University of London and Kingston University.
- To increase our engagement with local schools, colleges and community groups to promote healthier lifestyles.
- To increase collaboration with our partners, particularly via the South West London Acute Provider Collaborative (APC).

Digital Infrastructure



- Work to create or contribute to digital tools to help people better manage their conditions and symptoms, therefore helping to improve physical and mental health remotely.
- Ensure that managerial and clinical staff have the ability to work remotely and flexibly when needed (for example sufficient deployment of laptops, software, information governance etc).
- Offer teleconference options to patients and improve their access to more care at /or closer to home, thus helping to reduce pressure from wait times.
- Co-design with patients and the public to ensure our digital infrastructure is user friendly and equally accessible for all patients.
- Assess whether digital infrastructure is the best model of care for all (e.g. autism, dementia-friendly) and understand when the reduction in or loss of visual cues associated with digital care models is not effective or sufficient for certain patients.
- Upgrade our IT infrastructure and telephony systems to be interoperable and strengthen our systems and processes for cyber-security and education/training procedures.
- Ensure that our digital service model is designed into our care pathways.



13.0 Communication & Engagement

13.1 The benefits of communication & engagement

Good communication and engagement across both workforce and other relevant stakeholders (such as the local community and local service providers) can help to create a more effective service provision through a better understanding of stakeholder needs and closer relationships with people and projects.

Adopting a transparent and accountable approach to the services we deliver, the buildings we manage, and the people we care for will help to embed a resilient culture which understands and values the importance of sustainability alongside financial costs. Our workforce will be supported to deliver the Green Plan objectives and will be encouraged to make sustainable decisions whilst also encouraging healthier and more sustainable decisions for others within the community. This includes St George's workforce, visitors, service-users, wider local community (including local government) and healthcare commissioners and providers.

St George's commits to increasing local participation in health promotion by providing support to healthy living and wellbeing initiatives. Participation is extended to the local community including schools, sports clubs, social groups, adult learning centres etc. We pledge to be informing and to actively listen and learn from our stakeholders.

Where appropriate, safe and feasibly possible, we would like to extend our facilities to the local community to encompass stakeholder engagement which goes beyond the expected. For example we propose undertaking local community consultations to understand what value St George's can bring to the community by hosting charity events, local farmers markets, fun runs etc.

13.2 Key commitments

St George's will strive to act as a positive role model to its community, partners and workforce through encouragement of positive change across the St George's site and local community. This chapter considers four areas of priority for St George's to increase and improve its communication, engagement and participation with its workforce and local community. These include:

Campaigns



- Include regular articles in workforce and corporate communications.
- Ensure each site has a visible and designated sustainability notice board to engage all stakeholders.
- Positive news stories related to sustainability will be shared with the local press.
- Community events and partnerships will be used to further engagement.

Consultations



- We will work with local government and businesses to plan and promote sustainable goals and services.
- St George's will exchange information to define issues and debate problems and solutions with the public to enhance the role of health and sustainability.

Digital Media



- Key sustainability news and policies will be available on the intranet.
- St George's social media pages (e.g. Twitter) will be used to share sustainability news.
- St George's will ensure platforms are kept up to date and regularly used to share sustainability/estate news.
- Polls and digital Q&A sessions will be used to seek innovative ideas.

Awards



- Where appropriate, St George's will apply for national sustainability awards.
- Sustainability Awards will occur annually in recognition of individuals, projects and departments which engage with or action positive sustainable efforts.



14.0 Sustainability Governance

14.1 The importance of Good Governance

There is now widespread understanding and acceptance of the important role that governance plays in the success of organisations. Good governance has many benefits and makes good business sense. It encourages better informed, longer-term and more sustainable decision making, efficient use of resources and strengthens accountability. Furthermore, good governance can improve organisational leadership, management and oversight thus resulting in more effective interventions and better outcomes [IFAC Public Sector Committee, 2001].

For the purpose of this Green Plan, the following definition of NHS governance has been adopted:

“The systems and processes by which health bodies lead, direct and control their functions, in order to achieve organisational objectives and by which they relate to their partners and wider community.”

- The Audit Commission (2002), now known as the National Audit Office

Governance comprises the arrangements put in place to ensure that the intended outcomes for stakeholders are defined and achieved. The fundamental function of good governance in the public sector is to ensure that entities achieve their intended outcomes while acting in the public interest at all times. Acting in the public interest requires:

- A. Behaving with integrity, demonstrating strong commitment to ethical values, and respecting the rule of law.
- B. Ensuring openness and comprehensive stakeholder engagement.

This includes determining sustainable benefits (environmentally, socially and economically), the interventions necessary to optimise the achievement of intended outcomes, developing the capacity to deliver, managing risks, implementing good practice in a transparent manner and establishing a Sustainability Governance Structure (CIPFA, 2014).

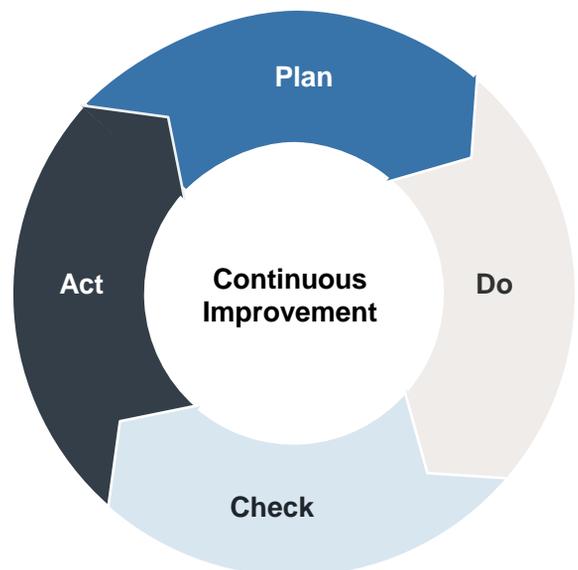
14.2 St George's Sustainability Governance

St George's currently follows the **“plan-do-check-act” (PDCA) cycle**, also known as the Deming Cycle, which is an iterative management process used to assist with the continuous improvement of our processes, people, products, and services. The PDCA cycle is a simple but powerful framework for fixing issues and has a positive impact on productivity and efficiency. Additionally, this method aligns to the International Organisation for Standardisation (ISO).

St George's does not currently report to the Board lead on Sustainability and a formalised Sustainable Governance Structure has not yet been established.

Following the development of this Green Plan, we will understand our current performance relative to the key areas discussed. Areas of priority have been identified to enable St George's to set out a plan to address how sustainability performance will be improved and who is responsible for ensuring that this is done.

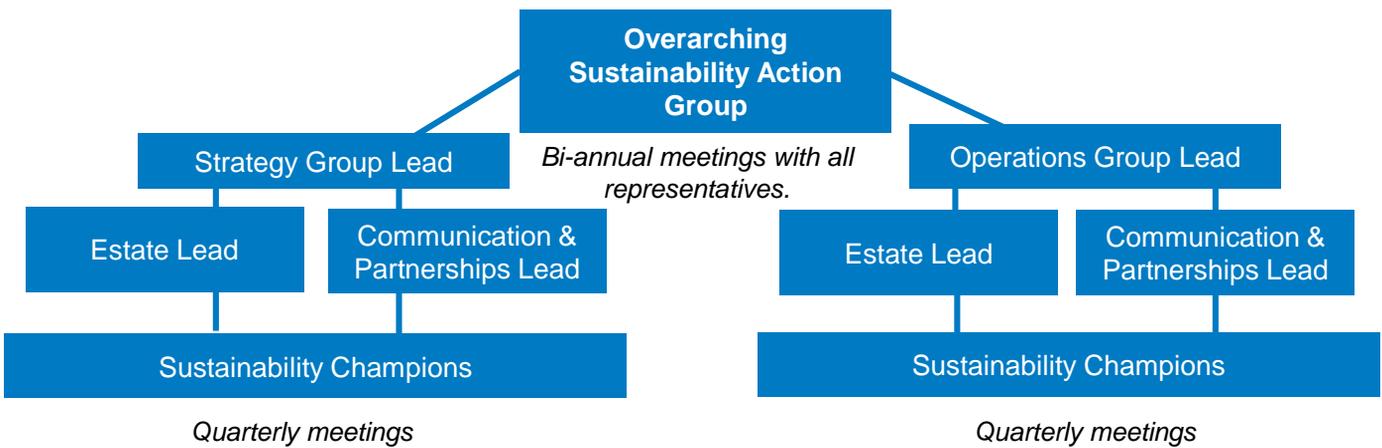
Carrying out the plan and recording the results achieved in addition to any barriers, challenges or unforeseen issues, will be undertaken. Finally, we will review the current Green Plan in 2-3 years time to monitor the progression of its objectives and its relevance moving forward in the development of a new Green Plan by the end of 2025.



Before the COVID-19 pandemic, St George's had a group of Sustainability enthusiasts who would meet to discuss sustainability issues and solutions, however this was never formalised and gradually the occurrence of meetings ceased. The below organogram and description of roles and responsibilities will help to bridge this gap and enable St George's to openly discuss sustainable development ideas and practices again.

By 2022, St George's will set up a Sustainability Champions Group (SCG). This will comprise of volunteers across our sites who are committed to promoting sustainable practices and reducing the ecological footprint of the estate. We realise the urgency in taking responsibility to address climate change and address other environmental and social issues, therefore the action group will collaborate to achieve results with sustainable outcomes. Innovation will be encouraged, and where possible, the SCG will engage with the local community and partners to further the reach of our engagement and initiatives.

Cross-functional teams will be encouraged to engage a wide range of stakeholders across the Estate which should include but not be limited to departmental representatives, canteen staff, cleaning staff, facilities management, human resources (HR), the Estate manager and Sustainability manager.



14.4 Roles & Responsibilities

The SCG is a cross-functional group which includes members from a variety of site-wide departments. The group is responsible for ensuring that best practice thinking and actions are undertaken across the Estate in relation to sustainability matters. Representatives ('Sustainability Champions') will help to maintain sustainability policies, encourage sustainable behaviours, and co-ordinate with their relevant department/team and stakeholders to share the information provided within this Green Plan.

A summary of core responsibilities includes:

- Assist with the tracking and reporting of Sustainability performance.
- Provide information required to develop and progress the Estate Strategy with relation to Sustainability targets and aspirations.
- Develop St George's policies on Sustainability matters and ensure these are communicated across the Estate by working with local facility teams and department leads to implement initiatives and activities.
- Provide input on sustainability matters to relevant stakeholders (e.g. active travel plans, resource efficiency tips etc.) and promote sustainable behaviours.
- Determine best practices, based on this Green Plan, to keep up with environmental, social and economic trends and requirements whilst also monitoring trends which may have a significant or material impact on St George's activities and performance.
- Co-ordinate with cross-functional teams to improve sustainability communication and engagement.
- Research local community events and campaigns which St George's can support and engage with from a sustainability and wellbeing perspective.
- Communicate St George's sustainability performance and achievements through quarterly meetings, St George's Annual Report and through other means such as local newspapers, the intranet, workshops etc.

14.5 The benefits of tracking and reporting progress

Reporting our progress to internal and external stakeholders will demonstrate our commitment to the Green Plan in addition to operating in a transparent and accountable manner. It will enable St George's to track current progress of performance targets and projects against this Green Plan and enable St George's to manage costs with full visibility. By reporting frequently, we will increase the amount of visibility into our projects and provide full insight to stakeholders. We will be in a position to recognise progress, stagnation or regress of elements in addition to having a greater understanding of stakeholder engagement and quality of work completed.

We are committed to learning and continual improvement, therefore by reporting and tracking our progress, we can identify opportunities for improvement more easily; whether these be cost efficiency improvements, quality of work, or communication related.

14.6 Measuring progress

St George's reports via the Model Hospital Benchmarking tool. This is an NHS digital information service designed to help the NHS improve productivity, quality and efficiency and enables health systems and Trusts to compare their productivity and quality, and identify opportunities to improve.

We will continue to complete mandatory annual return to NHS England on all areas of sustainable development. In addition to mandatory reporting, by 2022, we will ensure that a sustainability update is provided to the St George's Board on an annual basis which will depict our progress against targets and our short term and long term plans to meet any remaining or future targets.

At the time of writing this Green Plan, St George's does not currently report to the NHS Sustainable Development Unit Sustainability Reporting Portal (SRP) and has not attained a Sustainable Development Assessment Tool (SDAT) score.

By 2022, we will participate in these reporting and benchmarking tools. St George's will measure the progress of our Green Plan using these metrics. We are committed to continual development and improvement, therefore we will not only track our progress but report it annually.

Additionally, the results of St George's SRP carbon footprint, SDAT sustainability performance and Model Hospital sustainability benchmarks will also be reported in the Sustainability Section of our Annual Trust Report.

We aim to achieve an SDAT score of 70 or above and will seek to, as a minimum, maintain this score with the ambition to improve this year-on-year.

Reporting Portal (SRP)

- This will be used to measure St George's carbon emissions.
- It will enable us to keep track of our carbon footprint.
- This will comprise of Scope 1, 2 and 3 emissions to ensure both direct and indirect carbon emissions are understood.
- Information from the SRP will be included in the Sustainability section of the Annual Trust Report.

SDAT

- The SDAT comprises over 400 self-assessment questions which are aligned to the UN Sustainable Development Goals.
- SDAT will be used to measure St George's sustainability performance across the ten key impact areas which align to this Green Plan's areas of focus.
- St George's SDAT score will be reported upon in the Annual Trust Report.

Model Hospital

- This tool is used to benchmark our sustainability metrics against other NHS organisations in the five key impact areas.
- These include: energy, water, waste, EV parking and medical gases.
- St George's will continue to use this tool annually and report updates in each area within the Annual Trust Report.

14.7 Key Governance Commitments

In order to raise awareness of progress made and to ensure we are well placed to deal with changes proposed in this Green Plan, we will continue to work with partners across local authorities, health boards etc. to ensure any potential risks and impacts are identified and adequately assessed.

We will ensure that St George's embed sustainability into all policies and procedures and that accountability is clear to increase staff awareness and encourage sustainable behaviours to become our business as usual approach.

By 2022 we will:

- ✓ Have set up the Sustainability Champion Group;
- ✓ Complete mandatory annual return to NHS England on all areas of Sustainable Development;
- ✓ Reported to the NHS Sustainable Development Unit Sustainability Reporting Portal (SRP), and;
- ✓ Attained a Sustainable Development Assessment Tool (SDAT) score of 70+

By 2023 we will:

- ✓ Undertake a mid-term review halfway through this Green Plan's lifecycle;
- ✓ Report our progress and outline action plans to address any objectives which are behind schedule, and;
- ✓ Consider the relevance of ambitions, content and context of this Green Plan in preparation for the updated version in 2025.

By 2024 we will:

- ✓ Ensure Sustainable Development is referenced in the St George's vision and corporate objectives.

By the end of 2025 we will:

- ✓ Examine and evaluate the progress made within this Green Plan;
- ✓ Accordingly update objectives, processes and programmes, and;
- ✓ Develop a new Green Plan.



15.0 Our Roadmap

- ✓ NHS England Net Zero Carbon Target.

- ✓ Align to the NHS carbon emissions reduction of 80% between 2028 to 2032.
- ✓ Develop and act on a Green Space and Biodiversity Strategy.

- ✓ Develop a Climate Change Adaptation Plan (CCAP).
- ✓ Audit our digital infrastructure.
- ✓ Monitoring and evaluation of transport outcomes against strategies.
- ✓ Action targets set within Our People and Green Space/Biodiversity chapters.
- ✓ Complete the shift from paper-based to efficient and effective electronic clinical systems.
- ✓ Write a Green Space and Biodiversity strategy to formalise the needs of St George's.
- ✓ Develop new Green Plan.

- ✓ St George's Sustainability Champion Group (SCG) Set up.
- ✓ Attain SDAT Score.
- ✓ Report to SRP.
- ✓ Implementation of Travel Plan
- ✓ Develop a Climate Change Risk Assessment (CCRA).

- ✓ St George's Green Plan implemented.
- ✓ Attain DEC and EPCs.
- ✓ Update Travel Plan.
- ✓ Instruct a Sustainability Champion – Transport Lead.
- ✓ Procure energy from green providers.



- ✓ Undertake a study of switching to an all-electric Trust.

References

- BRE, Waste in the NHS – Key Facts. Available at: <https://www.bre.co.uk/page.jsp?id=2699>
- CIBSE (2012), Guide F: Energy efficiency in buildings.
- Costello A, Abbas M, Allen A, Ball S, Bell S, Bellamy R et al., 2009. Managing the health effects of climate change. London: The Lancet, Vol 373, no. 9676, pp.1693—733
- Department of Environment, Food, and Rural Affairs, 2012. Economics of Climate Resilience Buildings and Infrastructure Theme: Overheating in Residential Housing- Annexes (pg. 27) Available at: <http://randd.defra.gov.uk/Default.aspx?Module=More&Location=None&ProjectID=18016>
- Department of Environment, Food, and Rural Affairs, 2012. The Economics of Climate Resilience: Health and Well-Being Theme (pg. 40) [Online] Available at: <http://randd.defra.gov.uk/Default.aspx?Module=More&Location=None&ProjectID=1801>
- Department of Environment, Food, and Rural Affairs, 2013. Policy - Adapting to climate change [Online] Available at: www.gov.uk/government/policies/adapting-to-climate-change/supporting-pages/national-adaptation-programme
- GOV UK, (2021) COVID-19 Admissions. Available at: <https://coronavirus.data.gov.uk/details/healthcare>
- GOV,UK Common Minimum Standards for the Public Sector, Annex C. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/60904/CMS-for-publication-v1-2.pdf
- GOV.UK (2012) Government Construction Strategy: One Year On. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/61151/GCS-One-Year-On-Report-and-Action-Plan-Update-FINAL_0.pdf
- GOV.UK (2018) Our Green Future: The 25 Year Environment Plan. Available at : https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf
- GOV.UK (2018) Our Waste Resources Strategy for England. Available at : https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/765914/resources-waste-strategy-dec-2018.pdf
- GOV.UK (2018) Our Waste, Our Resources: A Strategy for England. Available at:
- GOV.UK (2019) A Green Future: Our 25 Year Plan to Improve the Environment. Available at:
- GOV.UK (2020) Air Pollution. Available at: <https://www.gov.uk/government/news/public-health-england-publishes-air-pollution-evidence-review>
- GOV.UK (2020) Greenhouse Gas Reporting Conversion Factors. Available at: <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020>
- Greater London Authority (2021) The London Plan 2021 Available at: https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf
- HMSO, 2008. Climate Change Act 2008 (c.27) [Online] Available at: www.legislation.gov.uk/ukpga/2008/27/pdfs/ukpga_20080027_en.pdf
- HTM 07-07 Environment and Sustainability; planning, design, construction and refurbishment. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/147950/HTM_07-07_Final.pdf

- Imperial College London (2019) Air Pollution Costs. Available at: <https://www.imperial.ac.uk/news/186406/air-pollution-england-could-cost-much/>
- Kings Fund (2019) NHS Facts and Figures. Available at: <https://www.kingsfund.org.uk/audio-video/key-facts-figures-nhs>
- Met Office (2020) Weather and Climate in the UK. Available at: <https://www.metoffice.gov.uk/about-us/press-office/news/weather-and-climate/2020/state-of-the-uk-climate-report>
- Met Office, 2019. UK Climate Projections: Headline Findings.
- NHS England (2020) Obesity and Physical Activity Statistics. Available At: <https://digital.nhs.uk/data-and-information/publications/statistical/statistics-on-obesity-physical-activity-and-diet/england-2020/data-tables>
- NHS England (2020) Sustainable Development in the NHS. Available at: <https://www.england.nhs.uk/about/sustainable-development/>
- NHS London Procurement Partnership (2021), Estates, Facilities & Professional Services. Available at: <https://www.lpp.nhs.uk/categories/estates,-facilities-professional-services>
- NHS Shared Business Services (2021) Framework Agreements. Available at: <https://www.sbs.nhs.uk/proc-framework-agreements-support>
- Office for National Statistics (2019) People Population and Community. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/lifeexpectancies/bulletins/nationallifetablesunitedkingdom/2017to2019>
- St George's (2019) Quality and Safety Strategy. Available at: <https://www.stgeorges.nhs.uk/wp-content/uploads/2020/03/Final-TB-Quality-and-Safety-Strategy-2019-2024-final-for-approval-Read-Only.pdf>
- St George's (2020) Patient Involvement (PPEG). Available at: <https://www.stgeorges.nhs.uk/patients-and-visitors/patient-involvement/ppeg/>
- St George's (2020) Patient Partnership and Experience Group Charter. Available at: <https://www.stgeorges.nhs.uk/wp-content/uploads/2020/08/Patient-partnership-and-experience-group-charter-v1.pdf>
- St Georges (2011) Working to Combat Crime Partnership. Available at: <https://www.stgeorges.nhs.uk/newsitem/partnership-working-combats-crime/>
- State of Nature – UK summary (2019). Available at: <https://nbn.org.uk/wp-content/uploads/2019/09/State-of-Nature-2019-UK-summary.pdf>
- The Health Foundation (2020) Understanding and Sustainable the Healthcare Service.
- UK Department for Business, Energy & Industrial Strategy (2020), 2019 UK greenhouse gas emissions, provisional figures. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/875485/2019_UK_greenhouse_gas_emissions_provisional_figures_statistical_release.pdf
- UK Green Building Council (2019) – Circular Economy Principles. Available at: <https://www.ukgbc.org/ukgbc-work/circular-economy/>
- United Nations Sustainable Development Goals. Available at: <https://sdgs.un.org/goals>
- Vardoulakis, S. and Heaviside, C. (Eds), 2012. Health Effects of Climate Change in the UK 2012 [Online] Available at: www.hpa.org.uk/hecc2012
- Wandsworth Local Plan (2016). Available at: https://www.wandsworth.gov.uk/media/3753/local_plan_core_strategy.pdf
- World Economic Forum (2020), Global Risks Report. Available at: <https://reports.weforum.org/global-risks-report-2020/#:~:text=0-.Global%20Risks%202020%3A%20An%20Unsettled%20World,geo-economic%20uncertainty%>
- Worldwide Fund for Nature's Living Planet Report (2020). Available at: <https://f.hubspotusercontent20.net/hubfs/4783129/LPR/PDFs/ENGLISH-FULL.pdf>

Carbon Emissions	Carbon dioxide (CO ₂) makes up the vast majority of greenhouse gas emissions from the sector, but smaller amounts of methane (CH ₄) and nitrous oxide (N ₂ O) are also emitted. These gases are released during the combustion of fossil fuels, such as coal, oil, and natural gas.
Circular Economy	The circular economy is a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible. In this way, the life cycle of products is extended.
Embodied Carbon	Carbon dioxide associated with the production of materials including the energy used to extract and transport raw materials and those emitted from the manufacturing process make up what is typically known as embodied carbon. A significant proportion of a product's lifetime carbon is locked into the fabric/materials; therefore understanding and addressing embodied carbon can provide potential carbon savings in its life-cycle, including reuse and decommissioning.
Energy Efficiency	Energy efficiency simply means using less energy to perform the same task, therefore eliminating energy waste.
Energy Use Intensity (EUI)	For most property types, the EUI is expressed as energy consumed per unit area per year. It's calculated by dividing the total energy consumed by the building in one year by the total floor area of the building.
Declare Labels	The Declare Label is a product transparency disclosure that identifies where a product comes from, what it's made of, and where it goes at the end of its life.
Green Energy Tarrif	A green tariff means that some or all of the electricity you buy is 'matched' by purchases of renewable energy that your energy supplier makes on your behalf. These could come from a variety of renewable energy sources such as wind farms and hydroelectric power stations. Some green supply tariffs are also nuclear-free.
Net Zero Carbon Building	Net zero carbon is when the amount of carbon dioxide emissions released on an annual basis is zero or negative. The World Green Building Council (WGBC) definition for a net zero carbon building is a highly energy efficient building that is fully powered from on-site and/or off-site renewable energy sources and offsets.
Operational Carbon	Operational carbon is the term used to describe GHG emissions from the the activities involved in running a building and manufacturing products and includes sources of carbon created by using of energy to heat, cool/ventilate, power machinery, safety lighting and for I.T. and white goods in offices and welfare areas.
Red List Materials	Red List Building Materials contain chemicals that have been designated as harmful to living creatures, including humans, or the environment. There are many "Red Lists" that have been developed specifically for building materials. These lists have primarily been developed by green building rating system developers and architecture firms.
Renewable Energy	Renewable energy, often referred to as clean energy, comes from natural sources or processes that are constantly replenished. For example, sunlight or wind keep shining and blowing, even if their availability at any point in time depends on season, time of day and weather.
Site Waste Management Plan (SWMP)	A Site Waste Management Plan (SWMP) is a plan that details the amount and type of waste that will be produced on a construction site and how it will be reused, recycled or disposed of.
Sustainable Drainage Systems (SuDS)	Sustainable drainage systems (SuDS) are designed to manage stormwater locally (as close its source as possible), to mimic natural drainage and encourage its infiltration, attenuation and passive treatment.
Water Conservation	It implies curtailment of water usage and includes day-to-day demand management for better water usage.
Water Efficiency	In simple terms, it means responsible use of fresh water and reducing the overall usage of water and minimizing wastewater. It also points toward using improved practices and technologies which deliver equal or better life service with reduced water consumption.
Zero Energy Building	A zero-energy building (ZE), also known as a zero net energy (ZNE) building, or net-zero energy building (NZE), is a building with zero net energy consumption, meaning the total amount of energy used by the building on an annual basis is equal to the amount of renewable energy created on the site, or in other definitions by renewable energy sources offsite, using technology such as heat pumps, high efficiency windows and insulation, and solar panels.
Zero Waste	Zero Waste is a set of principles focused on waste prevention that encourages the redesign of resource life cycles so that all products are reused. The goal is for no trash to be sent to landfills, incinerators or the ocean. Zero Waste refers to waste prevention as opposed to end-of-pipe waste management.

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