The Mid Yorkshire Hospitals NHS
NHS Trust

# SUSTAINABLE DEVELOPMENT MANAGEMENT PLAN

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## 1. Introduction

1.1 This plan is intended to further evolve the Mid Yorkshire Hospitals NHS Trust's commitment to sustainability and identify some of the key steps in developing a socially responsible approach to the way we manage our business.

1.2 Sustainable development considers how we organise our lives and work, (including our health services) without causing irreversible changes that will compromise the ability of future generations to meet their own needs.

1.3 The proposed Trust Carbon Management Plan is adended as an appendix to this document. Carbon reduction is a major component of sustainability, however there is a much wider agenda to address which is described below.

1.4 To underpin sustainability, the Government issued the UK Sustainable Development Strategy document in 2005 entitled "Securing the Future" which contained five guiding principles as follows:

- Living Within Environmental Limits
- Ensuring a Strong, Healthy and Just Society
- Achieving a Sustainable Economy
- Promoting Good Governance
- Using Sound Science Responsibly

1.5 "Securing the Future" also lists the following four shared priorities for action:

- Sustainable Consumption and Production
- Climate Change and Energy
- Natural Resource Protection and Environmental Enhancement
- Sustainable Communities

Through changing the way in which the Trust conducts its' business it can contribute to the achievement of these shared priorities by for example using less energy, reducing waste and recycling.

## 2.0 Sustainable Development within the NHS

2.1 In September 2007 the NHS Management Board made the following commitment to sustainable development.

"To continue to develop the NHS role as a good corporate citizen, taking sustainable approaches to reducing health inequalities, building stronger local communities, safeguarding the environment for the benefit of whole communities, including alleviating climate change through reductions in carbon attributable to NHS activities, and thus ensuring its own long term viability".

Mid Yorkshire Hospitals will adopt this commitment as a statement of intent underpinning this plan.

## 3.0 Corporate Citizenship

3.1 An important objective of the Trusts Sustainable Development Plan will be to be recognised as a good Corporate Citizen through its actions. This is a term used by the NHS to describe how NHS organisations can embrace sustainable development and tackle health inequalities through their day to day activities.

This means using NHS organisations' corporate powers and resources in ways that benefit rather than damage the social, economic and environmental conditions in which we live. How the NHS behaves, (as an employer, purchaser of goods and services, a manager of transport, energy, waste and water, a landholder and commissioner of building work and as an influential neighbour in many communities), can make a difference to people's health and to the well being of society, the economy and the environment. By operating as good corporate citizens the Trust can benefit from a healthier local population, improved staff morale and faster patient recovery rates; implemented properly, there will also be financial savings.

Acting as a good corporate citizen strengthens the Trusts commitment to the community as it progresses towards Foundation Status.

3.2 In achieving this objective the Trust will complete the Good Corporate Citizen Assessment Model which will enable it to re-assess and improve its contribution to sustainable development. The assessment is divided into six areas covering:

- Transport
- Procurement
- Facilities Management
- Employment and Skills
- Community Engagement
- New Building

3.3 The results of the assessment will enable the Trust to shape future policy and plans as it strives to be a good Corporate Citizen.

## 4.0 The Plan

4.1 The NHS Carbon Reduction Strategy for England (Jan 2009) identifies six reasons why organisations need to act now to understand, manage and reduce their carbon footprint:-

- The new legally binding Government framework and national targets
- The strength of scientific evidence to act on climate change
- The health co-benefits now for patients and population and for the health system itself
- The importance of cost reductions and energy resilience
- The willingness and commitment of NHS organisations and staff to act now

- The need for the NHS to be a leading public sector exemplar now.

The Trust adopts these reasons as a basis for this strategy and proposes to implement a Sustainable Development Plan. The SDP will be based on the following principles:

- Complying with all relevant legislation
- Including climate change in the organisation's risk register, including financial risk and in Board Assurance Frameworks
- Confirming the designated Board lead for sustainability allocating lead responsibilities
- Developing and implementing reduction plans to address the major components of NHS carbon emissions
- Working in partnership with identified stakeholders
- Pursuing an active communications initiative to engage all staff, visitors and patients who visit/use the Trust.
- Review progress using Good Corporate Citizenship Assessment model and key actions of the NHS Carbon reduction Strategy

The Trusts Carbon Management Plan, therefore describes a range of actions relating to carbon reduction which will be regularly reviewed to assess progress and address longer term targets. The Sustainable Development Plan provides the over-arching mission statement of actions (including carbon management) that will enable the Trust to minimise the impact of its activities on the environment and become a good corporate citizen. The principle actions of the plan are set out below:-

<u>Management</u>

a. Nominate a Lead Board Level Director responsible for sustainability

b. Nominate a Lead Director for sustainability

c. Nominate a Non-Executive Director as a sustainability champion

d. Include sustainability in job roles and responsibilities.

e. Integrate the principles of sustainability into all areas of Trust business including the objective setting/appraisal process.

f. Assess the resources and organisational structure required for the implementation and ongoing management of the Trusts Sustainable Development Plan.

g. Incorporate climate change in the organisation's risk register, including financial risk and the impact if carbon reduction targets are not achieved.

h. Develop a mechanism for monitoring progress through the Board Assurance Framework.

i. Progress towards a sustainable health system based on guidance provided in the NHS Sustainable Development Unit document “A Route Map for Sustainable Health”.

j. Incorporate sustainability, life cycle costing and carbon emission assessments into all revenue and capital business cases.

k. Develop Adaptation Plans to take into account and adjust for the impacts of climate change.

Legislation

l. The Trust will comply with all relevant environmental legislation.

m. The Trust will develop a central register to monitor compliance with environmental legislation.

Energy

n. The Trust will seek to achieve reductions in energy consumption in line with the NHS Sustainable Development Units agreed targets.

Waste

o. The Trust will continue to take measures to comply with the “HTM 07:01 Safe Management of Healthcare Waste

p. The Trust will aim to continue to reduce domestic waste production through increased segregation.

Design & Specification

q. Incorporate sustainability, life cycle costing and carbon emission assessments into all revenue and capital business cases.

r. Take account of climate change in refurbishment and new build design.

s. Use natural ventilation in preference to electrical cooling in staff accommodation and other areas where practical, by considering the location of heat emitting equipment etc.

t. Ensure that capital schemes incorporate carbon saving measures that provide 10% minimum reduction in carbon emissions e.g. lighting controls, high efficiency motors, insulation etc.

Communication & Reporting

u. Pursue an active communications initiative to engage all staff, visitors and patients who use or come to the Trusts facilities.

v. Regularly review progress using the Good Corporate Citizenship assessment Tool and key actions of the NHS Carbon Reduction Strategy. *(The latter is referred to in the Carbon Management Plan)*

w. Provide training for all staff on sustainability and energy saving.

Procurement

x. Develop sustainable policies and standards on utilities, waste, procurement, transport and within other relevant areas of the Trusts business.

y. Carbon efficiency will be incorporated in Trust tender specifications and selection criteria.

z. Ensure that carbon reduction is incorporated into the medical equipment procurement process including associated support facilities e.g. air conditioning.

Finance

aa. The Trust ensures that carbon literacy and carbon reduction is embedded in financial models and will utilise funding where available to meet its sustainability objectives.

bb. The Trust ensures that business cases/service changes consider the carbon impact and its link to costs.

cc. Develop and implement reduction plans to address the major components of carbon emissions including energy usage, procurement, transport and waste.

Links with External Organisations

dd. Work in partnership with identified stakeholders under Strategic Partnerships to ensure that collaboration helps the integration of the sustainability agenda.

4.2 Meeting the above objectives will be challenging and will entail the Trust making a step change in some of the ways it conducts business. Short-term priorities and cost constraints will need to be balanced against the longer term benefits of adopting sustainable development e.g. balancing life cycle costs with the initial capital cost of a building scheme.

## 5.0 Monitoring Progress

5.1 Over a period of time, the Trust will develop key indicators to track progress in becoming a more sustainable organisation. These will include NHS/Government targets, the Corporate Citizenship model and internal targets we set ourselves.

5.2 A key measure that will be used to monitor progress is the Trusts carbon emissions. These were assessed in 2007/08 to be 23,206 tonnes including transport; this figure has to be reduced by 10% i.e**.** 2,320 tonnes before 2015. *Note: This is an absolute figure and no account can be taken of increased activity or additional energy used*

*due to extreme weather conditions. For internal purposes, reports that take account of these factors will be produced.* By 2020 carbon emissions will need to be reduced in accordance with the Climate Change Act by 34%.

5.3 The NHS Sustainable Development Units document NHS Carbon Reduction Strategy for England Key Actions provides important guidance which the Trust will use to monitor progress.

## 6.0 Reporting Progress

6.1 Sustainability is an integral part of delivering high quality healthcare efficiently and reporting of progress will be incorporated into the performance management process for individual Divisions and Directorates. Sustainability will also form part of the Annual Report and become an increasing important indicator of the Trusts performance. The DoH Sustainable Development Unit has produced a standard set of criteria which require inclusion in Trust Annual Reports as follows:

Reporting Metrics including

- Increase/decrease in energy costs.
- Percentage recycled waste.
- Total energy consumption.
- $CO_{2e}$ emissions.
- Water consumption.

Organisational Standards including

- Plans to adapt to climate change in relation to organisation activity and buildings/estate.
- Sustainability considered as part of the risk management process.
- Developed policies on sustainable procurement.
- Sustainability and carbon awareness included in job descriptions for all staff.
- Carbon emissions are calculated in relation to procurement of goods and services.
- Sustainable Transport Plan in place.

The action plan detailing how the Trust intends to progress its challenging sustainable agenda can be viewed in Appendix 2

## 7.0 Review

7.1 The sustainability agenda is rapidly evolving in response to UK Government policy and international action to combat climate change. In order to ensure this plan remains current, it will be reviewed on an annual basis and any significant changes affecting the Trust will be brought to the attention of the MYHT Board.

## APPENDIX A

# Carbon Management Plan

## 1.0 Introduction

1.1 This document sets out the strategic plan for the implementation of a Carbon Management programme at Mid Yorkshire Hospitals NHS Trust. The Carbon Trust has developed the Carbon Management programme to prepare organisations for the strategic challenges presented by climate change, which is becoming an increasingly pressing issue. The Carbon Trust's Carbon Management Programme is a process to help plan for a reduction in carbon dioxide emissions. It comprises a five step process. The five stages are:-

Step 1 – Mobilise the Organisation.

Step 2 – Set baseline, forecast and targets.

Step 3 – Identify and quantify options.

Step 4 – Finalise strategy and implementation plan.

Step 5 – Implement the plan.

This document, therefore, constitutes step four of the programme, step five being the implementation phase of the plan. In the preceding stages extensive work has been carried out to establish the carbon management drivers which define the legal, fiscal, corporate and medical reasons for the Trust to carry out a carbon management programme. The Trust's carbon dioxide (CO2) emissions have been calculated for 2007/8 which is the baseline year, this level being 23,206 tonnes. . Further work is required with the Trust's PFI partners to extend the carbon management programme to cover the new PFI hospitals. This document takes account of the requirements of the NHS carbon strategy – *Saving Carbon, Improving Health* to present an overarching strategy, aimed at helping the Trust to adapt to a carbon-constrained economy.

1.2 The impact of climate change on global healthcare will be profound. This is described in detail in the landmark report in *The Lancet* (www.thelancet.com), Vol 373, May 16, 2009) titled "*Managing the health effects of climate change"*. The paper was written by the UCL Institute for the Global Health Commission. The report outlines the direct and indirect threats to global health from climate change through changing patterns of disease, water and food insecurity, vulnerable shelter and human settlements, extreme climatic events and population growth and migration. Although vector-borne diseases will expand their reach and death tolls will increase because of the heat waves, the indirect effects of climate change in water, food security and extreme climatic events are likely to have the biggest effects on global health.

## 2.0 Impacts of Climate Change in the UK

2.1 Some of the key impacts of change are as follows:

- An increased frequency and severity of heat waves.
- More frequent flooding with consequential disruption to services etc.
- Rising temperatures and changes in climate may also increase the spread of infectious diseases.
- Increases in skin cancer, sunstroke and sunburn.
- Concentrations of air pollutants and particulates are effected by changes in temperature and humidity are expected to increase respiratory infections.
- Existing inequalities in health may be exacerbated by climate change as the poor are already at a disadvantage. This will lead to increase death rates of hypothermia in the elderly.
- Increased migration to the UK from countries where climate change is more severe.

2.2 All these factors will induce new stresses in the NHS across the UK, including West Yorkshire. Therefore it is important that predictions in climate change and its impact on people are factored into the medium and long term planning of healthcare provision.

## 3.1 Carbon Management

### 3.2 Wider Context and Drivers for Carbon Management

Man-made CO2 and other greenhouse gas emissions, known as carbon emissions for short, are believed by the UK government and the majority of the scientific community engaged in the climate field to be a major contributory factor in the increase in global temperature seen since the Industrial Revolution. Whilst there are still some sceptics the evidence is very strong and the preventative principle has persuaded successive governments to commit to reducing emissions by 80% by 2050 as the UK's contribution to minimising the impact of climate change this century.

Government policy to achieve this target will certainly drive up the price of carbon. The NHS is a significant emitter of carbon both directly as a user of energy and indirectly as a consumer of goods and services and so will not be immune from these increased costs. Carbon reduction is therefore equivalent to cost reduction.

The case for carbon reduction is strengthened by the financial constraints that the NHS faces.

With little real growth in NHS expenditure and increased demand for services there is a significant incentive to reduce energy and therefore carbon to release cash for frontline services. A recovering world economy, limitations on energy supply and a more challenging regime in terms of carbon taxation will drive energy prices above general inflation for the foreseeable future. The reduction in carbon should not just apply to the Trust's direct energy consumption but also to the supply chain of our suppliers of goods and services if we are to achieve cost efficiencies.

The White Paper. Equity and Excellence – Liberating the NHS, specifically addresses carbon and energy efficiency. It states - Further efficiencies can, and need to, be made from improving energy efficiency and developing more sustainable forms of delivery across the NHS, for example through working with the Carbon Trust and similar bodies on carbon reduction programmes that reduce energy consumption and expenditure."

Public sector leadership is critical to the achievement of the Government's climate change objectives, such as the long term goal to reduce CO2 emissions by 80% by 2050 in the Climate Change Bill.

This has created a number of legislative drivers for public bodies:

- **The Climate Change Act (Nov 2008)**: which sets legally binding emissions reductions of 34% by 2020 and 80% by 2050 over a 1990 baseline. The public sector is expected to lead the way towards meeting the targets.

- **Display Energy Certificates**: As of 1 October 2008 there is a legal requirement for all public sector buildings with a total useful floor area of over 1,000m2, to show a Display Energy Certificate (DEC) in a prominent place, clearly visible to the public.

- **Carbon Reduction Commitment**: The Carbon Reduction Commitment is a mandatory scheme for organisations whose total electricity consumption is greater than 6,000MWh or approximately £500k. If an organisation falls within the CRC scheme all electricity and fuel emissions are covered. From April 2012 carbon credits at £12 per tonne must be purchased. The 2012/13 cost of purchasing these credits was approximately £279,000 . The 2013/14 cost of purchasing these credits was approximately £249,000. From 2014/15 the cost for carbon credits will increase to £15.60 per tonne.

**More info on the CRC can b**e found at:
http://www.defra.gov.uk/Environment/climatechange/uk/business/crc/index.htm

- **Carbon Trading**: **EU Emissions Trading Scheme** (EU ETS) 2005.

- **NHS Sustainable Development Unit:** the NHS strategy "Saving Carbon, Improving Health" sets a target for NHS Trusts to reduce their carbon emissions by at least 10% between 2008 and 2015 and to develop a Board approved carbon management plan. Furthermore, the recently published "Route Map for Sustainable Health" sets out a framework for the NHS to achieve a truly sustainable, low carbon health system.

- **Feed in tariffs for renewable energy**: NHS trusts can benefit from feed in tariffs for energy generated from renewable sources on site such as solar PV and the Trust must explore the potential options for such technology.

Finally and not to be under-estimated is the need for the Trust to be seen as a leader in the local community in sustainability in general. Climate Change if left unchecked is expected to have significant impacts on public health (e.g. increasing frequency of heatwaves) and it should be recognised that opportunities to reduce carbon emissions can have positive health impacts e.g. walking/cycling versus cars.

### 3.3 Strategic themes

Mid Yorkshire Hospitals NHS Trust has embarked on our carbon reduction programme against a background of significant change in the NHS. Detailed below are a number of strategic themes for carbon management within Mid Yorkshire Hospitals.

Strategic Theme 1: Optimise Existing Systems

Carbon Reduction within our Estate including physical improvements to building services and infrastructure and working in partnership with our tenants. This includes delivering our QIPP targets in relation to estates rationalisation.

Strategic Theme 2: Changing Behaviours and stakeholder involvement

Reducing carbon emissions from our own direct activities.
Working closely with stakeholders across health services and social services.

Strategic Theme 3: Long Term Sustainability

Embedding Carbon Management into the Trust's on-going Forward Plan to ensure a low carbon vision is delivered.

To achieve a low carbon vision and deliver against our strategic themes, the Trust will:-

- Comply with all relevant legislation and regulatory requirements;
- Include climate change mitigation and adaptation in the organisation's risk register including associated financial risks;
- Consider both mitigation and adaptation (including links to emergency preparedness) strategies for each objective.
- The Trust will reduce CO2 emissions from our operations by 10% by 2015 from 2007 baseline levels.'

More specifically, there are 11 thematic areas that will be addressed by the Trust:-

- Energy and carbon management – Improved energy management must be a priority for the Trust to ensure the estate and associated operations are low carbon.

- Procurement - Sustainable procurement of goods within the Trust.

- Low carbon travel and transport – Through the established travel sub-group the Trust will endeavour to reduce business mileage by 10%, this will have a positive financial impact as well as obvious environmental benefits.

- Water – The Trust will seek to reduce water consumption from operations as much as is possible.

- Waste – The Trust must address future waste management by implementing waste initiatives and improving on existing recycling systems

- Designing the built environment – All future building developments should be a designed to a BREEAM Code 'EXCELLENT' rating and all refurbishments to a 'VERY GOOD' rating.

- .Operational and workforce development – Awareness and education is central to embedding a low carbon culture in the organisation and future job descriptions highlight the importance of environmental awareness as soon as new staffs come in to the organisation.

- Role of partnerships and networks – The Trust has already and will continue to establish key partnerships in carbon reduction such as with the Mental Health Trust and future GP consortia

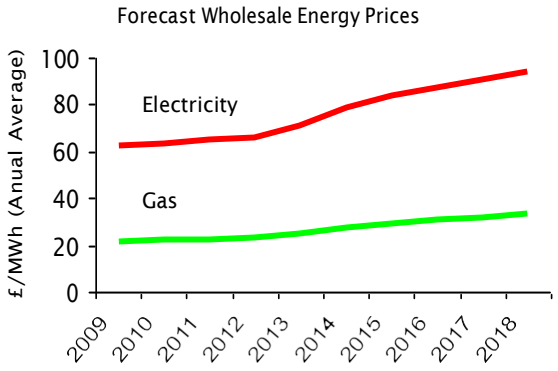
- Governance – Particularly in a time of significant change in the NHS, effective governance of the carbon management programme is vital to its future success.

- Finance – Given current financial pressures successful delivery of the carbon management programme can release significant revenue savings.

- Adaptations_- including forward planning, raising awareness, increasing resilience , managing risks and taking advantage of any potential benefits ( e.g. service delivery plans include forecast of size and profile of population, climate and resilience to extreme events

## 4.0 Carbon Management and the NHS

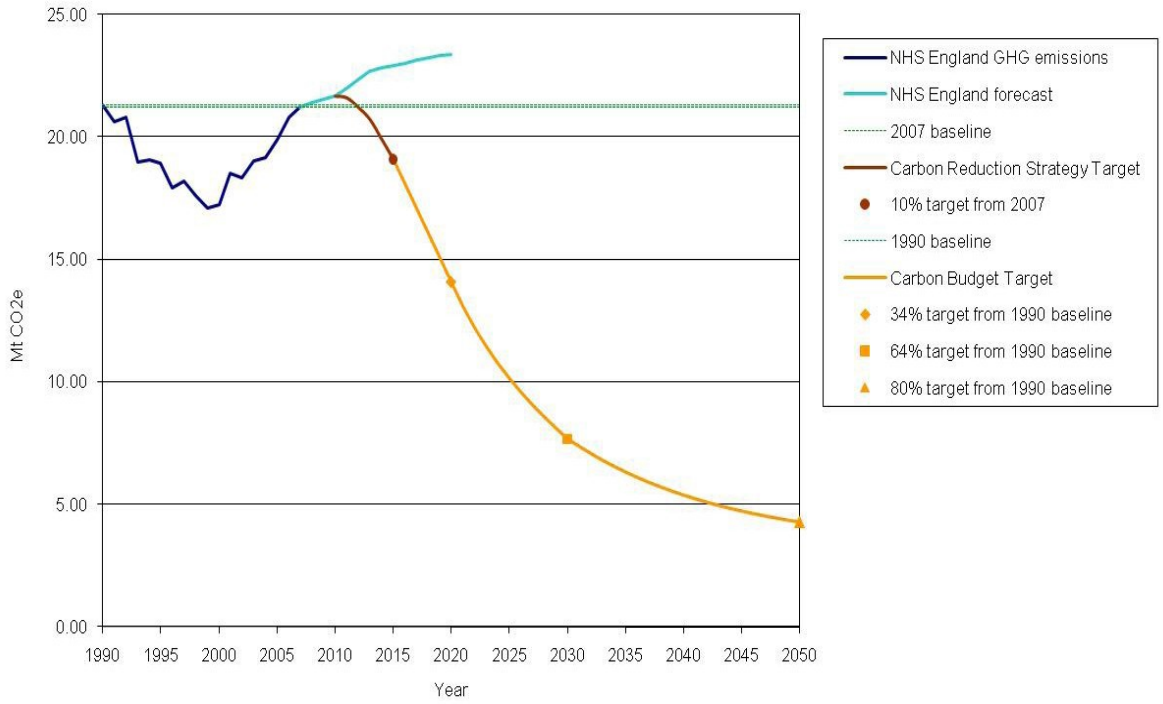
4.1 Electricity and fossil fuels have been used in the delivery of healthcare for more than 100 years, and reliance on energy has grown to a point where only the most basic healthcare can be delivered without it. The challenge for the twenty-first century is to continue to deliver world class healthcare without compromising the global environment.




Energy costs have risen dramatically in recent years, due to a variety of worldwide events. And as north sea oil reserves reduce and the UK moves from being a net producer to a net importer of energy, it is likely that future prices will rise even further.

Forecasting future energy costs is never easy, but supply companies are predicting a further 50% rise in electricity and gas costs over then next 10 years. Furthermore, increasing energy costs have knock-on effects as the costs of producing and transporting goods has increased. The effect is not just limited to goods as the effects of climate change and rising prices also increases the cost of services such as insurance. The carbon reduction programme will help to insulate the Trust against further price rises and will save money year on year.

4.2 In 2007 the NHS in England has a carbon footprint of 21 million tonnes of $CO_2e$ per year ($21MtCO_2e$). This is composed of energy (24%), travel (17%) and procurement (59%). Energy principally relates to heating, lighting, hot water, ventilation and cooling; travel to patients, staff and visitors and procurement to supply chain activities of companies producing goods and services. Despite an increase in efficiency, the NHS has increased its carbon footprint by 40% since 1990. The graph below contains the latest information from the NHS Sustainable development Unit on baseline emissions and climate change action targets.




4.3 Carbon emissions reduction has been acknowledged as a key objective of the NHS in the NHS Carbon Reduction Strategy "Saving Carbon, Improving Health" launched in January 2009 (Updated January 2010). The drivers for Carbon Management extend across a wide spectrum of influences, and are summarised in the Pestle diagram (Figure 1).

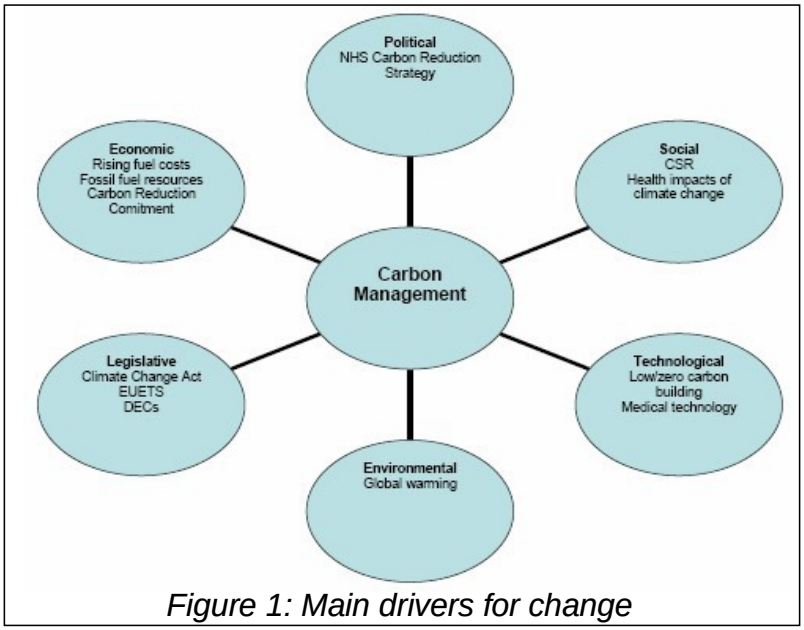



*Figure 1: Main drivers for change*

From a healthcare perspective unabated carbon emissions leading to global warming and climate change will have an explicit effect on the requirements and delivery of healthcare.

To combat these effects the UK government has now committed to an 80% reduction in carbon emissions by 2050. Within its Carbon Reduction Strategy the NHS has adopted this UK target and established an interim target of 10% reduction by 2015 (using 2007 as a base year) from 21Mt$CO_2$e to 19Mt$CO_2$e, and 34% (Updated from the previous figure of 26%) reduction by 2020.

This means meeting the NHS reduction targets will be a huge challenge as it will require the current level of growth of emissions to not only be curbed, but the trend reversed and absolute emissions reduced.

## 5.0 MYHT Current Position

5.1 The 2007/08 $CO_2$ emissions for the Trust total 23,206 tonnes. Our emissions are principally from energy use and transport. Indirect emissions such as procurement have not been included in these figures as they cannot be quantified accurately and the Trust has less direct control of them. However influencing procurement will impact on our carbon footprint by reducing transport, waste, and energy use of new products.

5.2 In terms of compliance for 2014, our current position is.

| Requirement | Action |
|---|---|
| Establish a Board approved Sustainable Development Plan | The Trust Sustainable Development Plan has been drafted and will be brought to the Board meeting for consideration. |
| Sign up to the Good Corporate Citizenship Assessment Model | The Trust are considering registration on the Sustainable Development Commission's Good Corporate Citizen Site and are currently reviewing the self assessment test, |
| Monitor, review and report on carbon | Carbon reporting will be added to the Estates monthly performance report. |
| Actively raise carbon awareness at every level of the organisation | Campaigns and awareness events will be implemented as part of the management plan. |

5.3 **Trust Carbon Indicator**

The carbon indicator shown in section 6.0 illustrates the Trust's performance in relation to carbon emissions from utilities and transport. The model has been developed by the Department of Health with the assistance of the Department for Environment, Food and Rural Affairs (DEFRA), the Environment Agency and other stakeholders, such as the NHS SDU and the Waste & Resources Action Programme (WRAP). The indicator applies standard conversion factors to the tonnages entered into the Estates Return Information Collection (ERIC) data returns in order to determine a carbon rating. Data entries analysed include; water, sewage, high temperature disposal, landfill disposal non-burn treatment and waste recovery/ recycling.

The format of the model resembles the commonly recognised Energy Performance Certificates (EPC's) and Display Energy Certificates (DEC's). The indicator shows Mid Yorkshire Hospitals as having a higher carbon efficiency in these emission areas than other trusts in our peer group (Large Acute Trusts); Mid Yorkshire Hospitals NHS Trust has achieved a C Status, 73, the typical carbon rating for our peer trusts has been calculated at 100.

## 6.0 The Carbon Management Plan

6.1 As a public body and one of the largest organisations in Mid Yorkshire, the Trust has a duty to manage its resources and $CO_2e$ emissions in a responsible way. The Trust has assessed and completed a comprehensive review of the carbon emissions of the organisation, with the identification of a total baseline for 2007/08 as 23,206 tonnes.

It is anticipated that energy usage will reduce in line with a 'change in thinking' regarding clinical technological decisions and management of the estate. Significant carbon reduction can also be achieved through rationalisation of the Trust estate; a reduction in the number of Trust occupied properties will result in less and more efficient use of energy.

The table below details the current position with regard to reducing the Trust's carbon footprint.

| **Scheme** | **Carbon Savings (tonnes $CO_2$)** |
|---|---|
| **Works already underway or committed.**<br><br>**See 6.2** | **1583.1** |
| **Further return opportunities.**<br>**(Subject to capital availability)**<br><br>**See 6.3** | **573+ bronte** |
| **Total** | **2463.1** |

6.2 To date the Trust has made some progress in implementing initiatives associated with carbon reduction which include:

6.2.1 **Project Name: Steam Plant Removal - DDH**

**Carbon Savings 40 Tonnes per annum**

Removal of steam gas fired generators in Ridings Building Plant Room 5, 2 x running 24 hours. No longer efficient form of heat due to change in use and over capacity.

6.2.2 **Project Name: Installation of Medium Pressure Hot Water Boiler at DDH (Scheme Cost £148k – Saving £35k pa)**

**Carbon Savings 258 Tonnes**

This scheme involved the installation of a new high efficiency MPHW Boiler to replace an existing 25 year old inefficient boiler.

6.2.3 **Project Name: Replacement and Extension of Building Management Control System – DDH (Scheme Cost £1.8M – Saving £111k pa)**

**Carbon Savings 436.2 Tonnes per annum**

The project involved extending the Hospitals BMS System to improve controls to Air Conditioning and Ventilation Systems and the installation of speed controllers to large electric monitors together with associated metering of energy usage.

6.2.4 **Project Name: Shuttle Bus Services**

**Carbon Savings 342.7 Tonnes**

This project involves the introduction of a Trust wide staff and goods shuttle bus service to reduce the number of journeys made by Trust vehicles. To date the scheme has resulted in Trust vehicle mileage reducing by of over 1.1 million miles per annum

6.2.5 **Project Name: Nightwatchman**

**Carbon Savings in excess of 500 Tonnes**
**(Scheme Cost £56k – Saving £76k pa)**

Monitoring and targeting progam of PC usages Trust wide, automation of unused systems. Will reduce server usage and increase the life costs of the system (reducing in decreased electrical consumption and potential large savings).

6.2.6 **Project Name: Photovoltaic/Solar Installation**

**Carbon Savings 6.2 Tonnes**
**(Scheme Cost £8k – Saving £1.7k pa)**

Renewable electricity, excellent payback and carbon reduction over a 25 year period. The use of renewable energies gives excellent public opinion and is at the cutting edge of the next generation of energy saving measures.

6.3 The plan identifies further opportunities for carbon savings in areas of energy management, waste management, waste, transport and procurement.

Examples of such schemes that may be undertaken as part of the carbon reduction plan are given below.

6.3.1 **Project Name: Eco Lighting - DDH**

**Potential Carbon Savings 15 Tonnes**
**(Scheme Cost – To be determined)**

The removal of outdated lighting, not only saves an extreme amount of energy but

also savings of large volumes of carbon. Progression within the lighting industry not only pushes forward a new modern design and aesthetically pleasing fitting within the NHS environment, but also shows our commitment to carbon reduction.

6.3.2 **Project Name: Closure of Clayton Hospital and Pontefract Medical Unit South**

**Potential Carbon Saving : Pontefract 300 Tonnes, Clayton 258 Tonnes**

These sites closed at the end of March 2013 and the reduction will therefore come into effect on the 2013/14 carbon reduction submission.

6.3.2 **Project Name: Site Rationalisation - DDH**

**Potential Carbon Saving – 307 Tonnes**

The Bronte Tower is planned to close in October 2016 and will result in carbon saving of 307 tonnes based on 2012/13 carbon arisings .

6.4 There is a lot more that needs to be done, and further examples are if the Trust standardised on printers with default settings for double sided printing, there would be savings in the cost of paper, delivery, waste collection and landfill charges for any that missed the re-cycling route. At the other end of the spectrum would be projects to move out of energy inefficient buildings to ones with low energy costs, more natural ventilation and light, built from sustainable materials

6.5 Achievement of these savings alone would leave the Trust short of the NHS 2015 target reduction of 10%; however as previously discussed future estate rationalisation is a key component which is expected to produce additional saving. Furthermore, the Trust needs to engage with its PFI Partner to identify and implement Carbon Reduction schemes in both the Pinderfields and Pontefract Hospitals to enable the Trust to achieve the 2015 target level savings.

## 7.0 Internal Communication

7.1 Strategy

When the programme for the awareness campaign has been developed, a complimentary communications strategy can also be produced. This will take the key events of the campaign and identify the best routes to communicate these activities to the wider community and maintain momentum. Examples could include:

| Event | Communications method |
|---|---|
| Signing policy | ▪ Press release |
| Launch event | ▪ Open day events |
| Energy walk around | ▪ Poster Campaign<br>▪ Emails |
| Change of season | ▪ Newsletter article e.g. insulation grants in winter time or low water gardening inn the summer |
| Annual report | ▪ Published Report<br>▪ Regular progress reports to Trust Board<br>▪ Publicised on web site |

7.2 General Awareness Campaign

To increase staff awareness and interest in the campaign, the following

**Internal Training** Energy efficiency messages can be included in existing training sessions e.g. induction training.

**Energy Walkabouts** Short visits to a building or area with the energy co-ordinator; to affirm good practice and encourage people to take the campaign seriously.

**Carbon section on ebulletin** A new energy section on the ebulletin every month of the campaign. Each new section would have a theme (e.g. lighting, PCs, water use etc.)

**Energy Poster Campaign** Covering different themes, e.g. electrical equipment, cooling, lighting, computers, water etc, available in hard copy (A3). Each poster to be campaign branded and the illustrations taken from the booklet to aid consistency. The posters will need to be laminated in clinical areas.

**Energy Stickers** Same comments can be applied as energy awareness information above

**Competitions** Energy based competitions or quizzes with prizes can be useful. Also if a particular area has done well a prize or some sort of recognition could be given.

**Websites** Campaign topics can be posted on the Talkback forum

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| | via the internet home page so that people can exchange ideas and information. Update and good practice information will be available on the Estates and Facilities pages of the Intranet. |
| **Existing Reports** | Add a section on energy performance/implications to standard reports |
| **Footers** | Include energy saving ideas or “Did you know?” messages as footers on internal communications |
| **Screen Savers** | Develop ‘energy saving’ and carbon reduction themed screen savers, to maintain a high level of staff awareness. |

## 8.0 The Way Forward

8.1 As the Trust moves towards Foundation Trust status, carbon management and sustainability will be high on the Corporate Citizen agenda. If the Trust is to demonstrate a genuine commitment to achieving the changes necessary and meet NHS targets to reduce emissions, it will need to consider ring-fenced funding on a continual basis. For this investment there will be positive benefits such as reduced energy consumption and the potential to reduce costs, positive perception of our responsible approach to carbon reduction.

8.2 The important elements in moving forward are:

a. Setting up a Carbon Management/Sustainable Development Group chaired by a director to develop an action plan and oversee its implementation. Potential membership would:

- Sponsored by Board Level Director
- Championed by a Non Executive Director
- Director of Estates and Facilities (chair)
- Estates Manager
- Energy Manager
- Head of Supplies
- General Manager Facilities
- Senior Nursing Representation
- Divisional Representation
- Resilience Lead
- Partnership Representative
- Workforce Plan Lead
- Co-opted representatives as required e.g. Public Relations

b. Developing an overarching policy for carbon management/sustainability underpinned by individual policies and procedures for specific key areas such as energy and travel.

c. Ensuring all capital schemes include design features that will reduce our carbon emissions and take account of life cycle costing i.e. additional investment in the scheme will produce in-use savings that are greater than the initial extra costs.

d. Vacating inefficient estate that disproportionally contributes to our carbon emissions in line with the estate rationalisation programme.

e. Acknowledging that carbon reduction/sustainability is a key driver to the Estates Strategy.

8.3 The NHS Sustainable Development Units document "NHS Carbon Reduction Strategy for England Key Actions" provides guidance on what the Trust needs to aspire to in the future as summary is produced below.

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| Carbon Managmt | Board level annual reporting | Use carbon as the measurement for target reduction. | Create a strategic plan to develop renewable energy sources | Evaluate capital developments on a whole life cost basis. | All staff should be able and encouraged to take responsibility for carbon reduction. |
| Procurement & Food | Manage operations and procurement efficiently, thereby minimising wastage and carbon from the outset. | Work with suppliers to develop sustainable procurement. | Consider local procurement, whole lifecycle costs and the environmental impact of financial decisions. | Reduce the carbon footprint of pharmaceuticals within the NHS | Promote sustainable procurement Promote sustainable food and nutrition. |
| Travel | Develop a Board approved active travel plan. | Introduce a flat rate for business mileage. | Establish consistent monitoring arrangements. | Review the need for staff, patients and visitors to travel. | Healthcare delivery must continue to move closer to the home. |
| Water | Efficient use of water should be integrated into building developments at the design stage. | Water costs and consumption should be measured, monitored and reported annually. | Leaks in NHS infrastructure should be identified and fixed immediately | Water efficiency technology should be adopted as standard across the NHS estate. | Routine purchasing of bottled water should be avoided |
| Waste | Board level reporting on the management of domestic, clinical and hazardous waste. | Balanced risk assessment of waste and its associated costs and carbon | Ensure staff have the necessary skills to manage waste legally, efficiently and cost effectively | Monitor the quantity and cost of all waste streams and set targets reduce them. | The DH and the NHS SDU will consider appropriate targets to - reduce waste |
| Built environment | All new buildings and major refurbishments should be designed to withstand significant climate change and weather extremes. | All new healthcare buildings should aim to achieve a target of being low carbon by 2015. | A Low Carbon Design Taskforce of public and private sector expertise should be established to develop a blueprint for the optimum low carbon healthcare building, accompanied by best practice guidance | All decisions about design and build of healthcare facilities must be explicit about how they encourage a broader approach to sustainability including transport, delivery of services and community engagement | All buildings need to have a significantly lower carbon impact, not only in their construction but also in their lifetime use and in their decommissioning. NHS buildings must be designed to promote sustainable behaviours in staff, patients and visitors |
| Workforce | Future leadership development should take account of the organisational and individual competencies required to deliver carbon reduction. | NHS organisations and SHAs should work in partnership with Higher Education Institutions to ensure that sustainability and carbon reduction concepts are included in undergraduate and postgraduate curricula | NHS organisations should consider including sustainability and carbon governance as a responsibility on all job descriptions for Chief Executives and Director level posts and on all job descriptions for NHS staff. | NHS organisations must ensure their staff have information about, and opportunities to use, low carbon travel options (see travel). | Audio, video and web conferencing technology must be made available by NHS organisations and staff must be trained in these technologies to support a cultural shift away from routine care and other high carbon travel and to encourage more home working where appropriate. |

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| Partnership | The NHS should use its leverage within local partnership and performance frameworks to promote carbon reduction. | Every NHS organisation should pursue climate change action in their Local Strategic Partnership (LSP). | NHS/DH regional sustainable development networks need further support to ensure wide representation across organisations and functions. | Each SHA Board should receive, at least annually, a report about progress in meeting the requirements of this strategy in their region. | The NHS should take a lead on sustainable development and carbon reduction and be an exemplar to other sectors and to other health systems. |
| Governance | Sign up to the NHS Good Corporate Citizenship Assessment Model and produce a Board approved Sustainable Development Plan sure, monitor and reduce direct carbon emissions. | The NHS should set itself targets and trajectories to at least meet the provisions of the Climate Change Act. In the first instance this should be a 10% reduction of the 2007 levels by 2015, as a minimum. | Carbon reduction and sustainable development are corporate responsibilities for all organisations and should be an inherent part of each NHS organisation's performance and governance mechanisms. | Healthcare regulators should consider making sustainability and the environmental impacts of services an integral part of quality standards. | Deliver carbon reduction through the commissioning frameworks; the NHS delivers on its sustainability commitments within Local Area Agreements (LAAs) and Sustainable Development Regional Networks |
| Finance | Develop carbon literacy and embed carbon reduction in to financial mechanisms. | Take advantage of schemes which support investment in energy efficiency initiatives. | Implement guidance on the Carbon Reduction Commitment. | Develop local strategic partnership arrangements and regional economic forums | Incorporate further incentives to support carbon reduction in the NHS. |

## 9.1 **Risks to the Organisation**

9.2 A carbon dashboard will be developed to assist in understanding the risks to the organisation; the current "work in progress" version is detailed below:

| Key Legislation | Purpose | Risk | Mitigation |
|---|---|---|---|
| EU Emissions Trading Scheme (2005) | Introduced to reduce energy to 8% below 1990 levels as part of the Kyoto Protocol. | Carbon is traded at European level as a commodity and prices can fluctuate. | Propose formation og Carbon Management Group |
| Carbon Reduction Commitment (UK Energy White Paper 2007 - Starts 2010) | The scheme covers Carbon emissions from electricity used. It operates on a cap and trade basis and is designed to improve energy efficiency in the UK. | If the Trust and the UK as a whole do not reduce carbon consumption then the scheme costs will ratchet up significantly.<br><br>Formal Purchasing strategy needs to be agreed by Carbon Management Group.<br><br>Energy Market forces may increase this cost | Carbon Management Group will work to minimise costs and risk |
| The EU Directive on the Energy Performance of Buildings - Energy Performance Certificates | All buildings require an Energy Performance Certificates.. | Both of these and the Carbon Reduction Commitment give the public information on the energy efficiency of our estate | Periodic renewal programme in place |
| Display Energy Certificates | Display Energy Certificates are required to show the energy efficiency of public buildings. | Approx £8K revenue per year. | Annual programme in place |
| Climate Change Bill (Nov 2008) Incorporated into | Sets the target for carbon emissions to be at least 10% lower | The penalties for not meeting these targets is currently not clear. | Work towards targets as per Carbon Management Plan |

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| Saving Carbon Improving Health | than 2007 levels by 2015, 34% lower by 2020 and 80% lower by 2050. | | |
| Waste | Carbon reductions due to better segregation and more efficient packaging | Cost of disposal is higher | Increase segregation and work towards further compliance with HTM 07-01 |
| Climate change impacts on weather extremes | All Trust need to have plans in place to deal with weateher extremes | Extreme weather conditions impacting on services | Resilience Forum to further develop action plans |

## 10.0 **In Summary**

Resulting from the Trust's day to day activities is the production of carbon dioxide. This will affect the organisation both financially and from a health perspective. In formulating and enhancing this Carbon Management Plan, the Trust will compliment the efforts to reduce carbon dioxide production and reduce the affects of global warming for which it should be commended.

| Area of CRS | SDMP Objective | Plan | Timeframe / Delivered by | Metrics to Measure Performance | Baseline figure | Suggested Lead Manager |
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| 1.<br><br>Energy and Carbon Management | Agree energy saving and carbon reduction targets. (e.g. reduce absolute carbon emissions by 3% this year) | Examples:<br>➢ Run a staff energy awareness campaign;<br>➢ Install local hot water boilers;<br>➢ Implement software to turn office computers off overnight;<br>➢ Install energy efficient lighting. | | Potential Sources:<br>➢ ERIC data;<br>➢ DEC advisory Report;<br>➢ Metered Energy Use;<br>➢ NHS Reporting on Sustainability Framework tool. | | |
| 2.<br><br>Procurement and Food | Agree carbon reduction targets for procurement (e.g. reduce waste, cost and carbon emissions from goods and services by 2% this year) | Examples:<br>➢ Review lean ward restocking policy;<br>➢ Review high expenditure goods and services to identify action;<br>➢ Use local food suppliers and businesses;<br>➢ Encourage / require suppliers to develop their own SDMPs. | | Potential Sources:<br>➢ P4CR framework;<br>➢ Procurement section of the GCC assessment model;<br>➢ Government Buying standards and Greening Public Procurement. | | |
| 3.<br><br>Low Carbon Travel, Transport and | The emphasis should be on providing low carbon models of care by focussing on care closer to home, telemedicine, videoconferencing for | Examples:<br>➢ Review recurring business mileage expenditure to identify meetings that could be conducted by | | Potential Sources:<br>➢ NHS reporting on Sustainability Framework tool;<br>➢ Business mileage expense data from finance department; | | |

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| Access | meetings, etc.<br>(e.g. teleconferencing to replace 5% of business miles) | teleconference;<br>➢ Develop an active travel plan that promotes public transport, cycling and walking. | | ➢ Staff travel surveys;<br>➢ Travel section of the GCC assessment model;<br>➢ Energy Saving Trust fleet review. | | |
| **Area of CRS** | **SDMP Objective** | **Plan** | **Timeframe / Delivered by** | **Metrics to Measure Performance** | **Baseline figure** | **Suggested Lead Manager** |
| 4.<br>Water | Ensure the efficient use of water by measuring and monitoring its use.<br>(e.g. reduce metered water use by 2% this year). | Examples:<br>➢ Set stretching targets around operational response time for repairing leaks;<br>➢ Avoid the routine purchased of bottled water unless clinically required;<br>➢ Install water efficient technology; | | Potential Sources:<br>➢ Local water company may be able to provide carbon data and identify leaks;<br>➢ Consumption data e.g. monitored for ERIC;<br>➢ NHS reporting on Sustainability Framework Tool Environment Agency | | |
| 5.<br>Waste | Monitor, report and set targets on management of domestic and clinical waste, including reduction and appropriate disposal of waste in medicines, food and ICT.<br>(e.g. increase % of organisational waste recycled by 15%) | Examples:<br>➢ Conduct an audit on appropriate segregation of clinical and domestic waste;<br>➢ Provide recycling facilities in public areas and offices;<br>➢ Work with suppliers to reduce the amount of packaging products come in. | | Potential Sources:<br>➢ Contracts and collection receipts;<br>➢ Data e.g. monitored for ERIC;<br>➢ Facilities Management Section of the GCC assessment model;<br>➢ NHS Reporting on Sustainability Framework Tool | | |
| 6.<br>Designing the built | Ensure built environments are designed to encourage SD and low carbon usage, and to promote wellness and | Examples:<br>➢ Plan improved access and increased green space in hospital grounds; | | Potential Sources:<br>➢ Data e.g. monitored for ERIC;<br>➢ The DH PAM; | | |

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| Environment | resilience to climate change in every aspect of their operation | ➢ Carry out a risk assessment: are buildings resilient to projected changes in climate, and to weather extremes?<br>➢ Refurbish buildings to reduce carbon (e.g. wall insulation) | | ➢ The EA/UKCIP tools;<br>➢ Buildings section of the GCC | | |
| **Area of CRS** | **SDMP Objective** | **Plan** | **Timeframe / Delivered by** | **Metrics to Measure Performance** | **Baseline figure** | **Suggested Lead Manager** |
| 7.<br>Organisational and Workforce Development | Support staff by promoting increased awareness, supporting behavioural change, encouraging home working, low carbon travel and the use of ICT.<br>(e.g. all staff are aware of the benefits of acting sustainably and have the skills and competencies to implement sustainability initiative) | Examples:<br>➢ Include a section of sustainability in staff induction;<br>➢ Include sustainability as a duty in all JDs;<br>➢ Promote the development of leadership competencies to deliver carbon reduction and improved CSR performance;<br>➢ Review workforce policies to ensure they promote sustainable behaviour. | | Potential Sources:<br>➢ % of staff who have received training on sustainability;<br>➢ Workforce section of the GCC assessment model;<br>➢ NHS Reporting on Sustainability Framework tool | | |
| 8.<br>Role of Partnerships / Networks | Consolidate partnership working and community engagement and make use of its leverage within local frameworks. | Examples:<br>➢ Develop resilience plans to deal with projected changes in climate and extreme weather events with partners; | | Potential Sources:<br>➢ Environment Agency and UKCIP tools;<br>➢ NHS reporting on Sustainability | | |

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| | (e.g. the organisation is an active member of the local sustainability and / or climate change network). | ➢ Outline a communications plan for reporting on sustainability to the public;<br>➢ Develop a patient and public engagement plan;<br>➢ Develop a whole systems approach by specifying how the organisation will engage with partners to deliver SD. | | Framework tool;<br>➢ Organisation's Annual Report;<br>➢ Climate change partnership | | |
| **Area of CRS** | **SDMP Objective** | **Plan** | **Timeframe / Delivered by** | **Metrics to Measure Performance** | **Baseline figure** | **Suggested Lead Manager** |
| 9.<br>Governance | Ensure governance processes are in place to ensure sustainability is embedded in the organisation.<br>(e.g. sustainability is considered in every decision made by the board). | Examples:<br>➢ Clear SD targets and actions needed to meet legal, NHS and organisational targets<br>➢ Regular monitoring with actions showing progress;<br>➢ Service delivery decision consider SD impact, e.g. using CIA<br>➢ Financial decisions consider whole lifecycle costing | | Potential Sources:<br>➢ EMS Governance summary on SDU website;<br>➢ Carbon Impact Assessment template on QIPP evidence | | |
| 10.<br>Finance | Quantify cost and carbon reduction options as part of efficiency improvements including QIPP<br>(e.g. triple bottom line for | Examples:<br>➢ Whole lifecycle costing for procurement contracts;<br>➢ Net present value and return on investment for projects; | | Potential Sources:<br>➢ NHS reporting on Sustainability Framework tool;<br>➢ Save Money by Saving Carbon | | |

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| | sustainability: carbon, social and cost impact assessment performed for all projects) | ➢ MAC curves for all large investments and projects | | for information about MAC curves | | |
| Adaptation – not in CRS but is a requirement for an SDMP Action Plan | Includes forward planning, raising awareness, increasing resilience, managing risks and taking advantage of any potential benefits (e.g. service delivery plans include forecast of size and profile of population, climate and resilience to extreme events) | Examples:<br>➢ Create a section in the organisational risk register that addresses the challenges of building resilience to climate change and covers the legal, financial, organisational, reputational and service risks. | | Potential Sources:<br>➢ NHS SDU Guidance on Adaptation;<br>➢ The EA/UKCIP tools Risk register;<br>➢ Climate Change Partnerships | | |