The Royal Wolverhampton Hospitals NHS Trust

NHS

Trust Board Report

Meeting Date:	25th July 2011
Title:	Sustainable Development Management Plan
Executive Summary:	All Trusts are required to have a Sustainable Development Management Plan in place. The Trust's document in response to this requirement is attached.
Action Requested:	Approve.
Report of:	Acting Director of Estates Development
Author: **Contact Details:**	Brian Midgelow-Marsden Tel 01902 695947 Email: brian.midgelow-marsden@nhs.net
Resource Implications:	Capital & Revenue consequences already approved as part of Carbon Management Plan.
Public or Private: (with reasons if private)	Public Session
References: (eg from/to other committees)	Sustainability & Carbon Reduction Group 14th July 2011.
Appendices/ **References/** **Background Reading**	• Attachment 1 and accompanying appendices • www.sdu.nhs.uk • NHS Sustainable Development Management Plans – Guidance for writing a Board-level SDMP
NHS Constitution: (How it impacts on any decision-making)	In determining this matter, the Board should have regard to the Core principles contained in the Constitution of: ♣ Equality of treatment and access to services ♣ High standards of excellence and professionalism ♣ Service user preferences ♣ Cross community working ♣ Best Value ♣ Accountability through local influence and scrutiny

Background Details

1	The Sustainable Development Management Plan has been developed in accordance with new guidance issued by the NHS Sustainable Development Unit in 2011. The document attached is the overarching Plan which outlines the Trust's response to Climate Change to 2014/15 and incorporates the Carbon Management Plan already approved by the Trust Board in March 2011. This Plan now replaces the Sustainability & Carbon Reduction Strategy approved by the Trust Board in December 2009.

Sustainable Development Management Plan

2009/10 – 2014/15

FINAL 14 July 2011

THE ROYAL WOLVERHAMPTON HOSPITALS NHS TRUST

SUSTAINABLE DEVELOPMENT MANAGEMENT PLAN
2009/10 – 2014/15

SECTION 1: Introduction and Background

1.1 Introduction

The Royal Wolverhampton Hospitals NHS Trust is a major employer, purchaser of goods and services, manager of transport, energy, waste and water, and a neighbour, landholder and commissioner of building work. Given all these roles, the Trust will use its corporate powers and resources in ways that benefit rather than damage the social, economic and environmental conditions in which the local community lives, i.e. become a Good Corporate Citizen.

This Sustainable Development Management Plan (SDMP) sets out the Trust's commitment to embracing sustainable development and reducing the Trust's carbon footprint through value for money solutions that enable the achievement of the Trust's service and estate strategies. The Trust will deliver this both through mitigation (i.e. reducing the impact of climate change through reduced usage of energy) and adaptation (i.e. changing practice or systems to respond to the impact of climate change on the environmental, social and financial climate, and take advantage of any potential benefits).

The Trust Board has the following vision:

"As part of our commitment to be a first class hospital in every way, the Trust is committed to being a Good Corporate Citizen, to embracing sustainable development, tackling health inequalities and reducing its carbon footprint. Where a positive impact on the Trust's environment is not possible (e.g. the generation of waste), the Trust will minimise the adverse impact of its activities."

In setting out this Plan, The Trust recognises:

- Progress to date and the need to balance short-term solutions with the crucial opportunities presented through its site master plan in the medium to long term;
- The Trust's pivotal public sector role as a major local employer, investor and resource user to educate, change practices and lead by example.
- The legally binding Government framework and national targets;
- The strength of the scientific evidence to act now on climate change;
- The health co-benefits now for patients and the local populations, and for the health system itself, with a shift of focus from responding to ill health to health promotion;
- The importance of cost reductions and energy resilience; and,
- The willingness and commitment of stakeholders for action.

1.2 National Context

Sustainable development is defined as 'enabling all people to satisfy their basic needs and enjoy a better quality of life without compromising the quality of life of the future generation'[1].
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[1] Sustainable Development Strategy (SDS) (Securing the Future, 2005)

To ensure sustainable development, society – and the people and organisations within it - must operate within available resources whether these are financial, physical or human. This challenge is increasingly pertinent at a time of economic and financial constraint. Figure 1 represents the financial, oil production and carbon reduction shortfall facing the NHS by 2020[2].

While all these components are critical, climate change is the biggest health threat facing the world today. It is caused by significantly increasing levels of carbon emissions that mean that global temperatures will rise to a level that will have major impacts on the geography and sociology of every country.

Stabilising and reducing carbon emissions is central to helping people live within environmental limits, just as addressing climate change is central to a healthy, just and fair society.
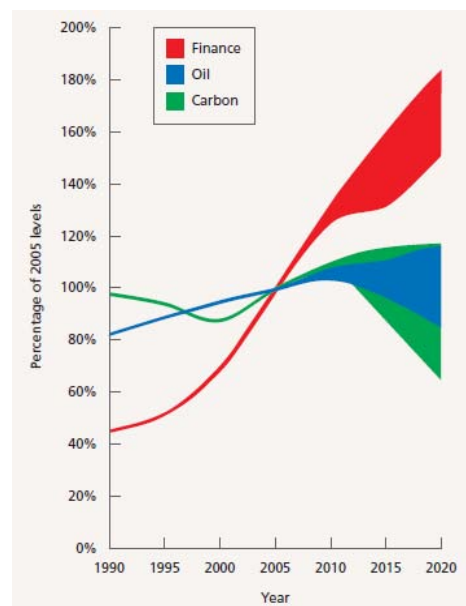

Figure 1: The NHS Carbon Shortfall to 2020

'Carbon footprint' describes the carbon emissions generated from human activity and relates to the carbon emissions generated by an organisation. Sustainable development is the framework within which carbon emissions will be reduced and services maintained without exhausting natural resources. Good Corporate Citizenship is the term used by the NHS to describe how NHS organisations can embrace sustainable development and tackle health inequalities.

Carbon reduction is identified as being part of a virtuous circle, as shown in Figure 2.

There is global consensus on the need for prompt and coordinated action to ensure sustainable management of finite resources, which has been enshrined into UK Government policy and international law, including:

The Climate Change Act 2008 sets legally binding emissions reductions, which are reflected within the NHS Carbon Reduction Strategy for England[3], which confirms the following targets (based on improvement from 2007 levels):

- 10% reduction by 2015;
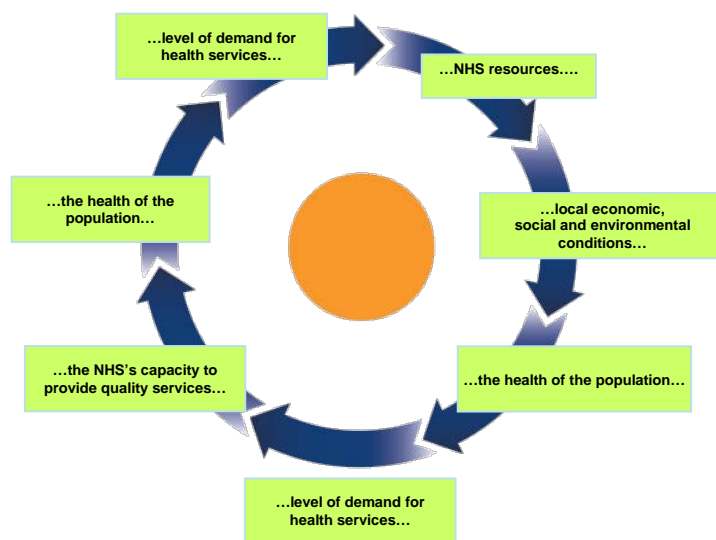- 34% reduction by 2020;
- 80% reduction by 2050.

Figure 2: The Virtuous Cycle of Carbon Reduction

Despite an increase in efficiency, the NHS has increased its carbon footprint by 40% since 1990. Therefore, achievement of these national targets will require the current level of growth of emissions not only to be curbed, but the trend reversed and absolute emissions reduced.

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[2] Route Map for Sustainable Health (NHS Sustainable Development Unit, 2011)
[3] NHS Carbon Reduction Strategy for England, January 2009

1.3 Trust Commitment

The Trust is committed to:

- Achieving the national sustainability and carbon reduction targets, as reflected in the Board approved Carbon Management Plan (CMP), which confirms that the Trust will
  - o Deliver a core target to reduce its carbon emissions by at least 15% compared to the 2009/10 baseline, by 2014/15; and,
  - o Work towards the Trust's ambition to achieve a stretch target of an absolute reduction in the Trust's CO2 emissions of at least 20% from the 2009/10 baseline, by 2014/15; and,
- Making continued progress against the Good Corporate Citizenship assessment model, achieving a score of "Excellent" in at least two questions in each area of the Good Corporate Citizenship model - or a minimum of 70% by 2014/15.

Adaptation to climate change will pose a challenge to both service delivery and infrastructure in the future. It is therefore appropriate that the Trust considers it when planning how to best serve its patients in the future.

1.4 Objectives of the Sustainable Development Management Plan

The SDMP has the following objectives:

- To comply with all relevant legislation and regulatory requirements;
- To confirm the inclusion and response to climate change within the Trust's risk register, addressing both climate change mitigation and adaptation risks as well as associated financial risks; and,
- To identify both mitigation and adaptation strategies for each programme area.

The Plan provides a coordinating function for enhancing (where required) planning, delivery and monitoring the broad scope of works associated with sustainability and carbon reduction. As such, the strategy has critical interdependencies with other strategies, policies and operational plans (including Trust's Estate Strategy) all of which commit to the principles of sustainability, as shown in Appendix 1. It also provides the strategic framework for coordination of annual implementation plans.

Consistency between the SDMP and interrelating strategies and plans will be ensured through the Sustainability and Carbon Reduction Group at which all agendas relevant to sustainability are addressed.

SECTION 2: Trust Sustainability and Carbon Reduction Measures

2.1 Energy and Associated Carbon Management

The Trust will seek significantly to reduce emissions arising from energy consumption utilising a range of technical and other measures. The Trust will also develop more resilient and renewable energy production, decreasing its reliance on nationally supplied electricity.

Where are we now?
- The Trust spent £2.62 million on energy during 2009/10, increasing to £2.64 million in 2010/11, with ongoing cost pressures anticipated due to national projections of rises in energy costs.
- The energy performance/usage profile for New Cross Hospital provides an overall usage figure of 64 Gj/100m^3 in 2010/11 (reduced from 71 Gj/100m^3 in 2008/9) compared with a target of 35-55 and 55-65 GJ/100m^3 for new and existing buildings respectively.
- The Trust Board-approved Carbon Management Plan (CMP) identifies the existing, near and medium term projects that are planned to deliver a real reduction in carbon emissions of up to 7,132 carbon tonnes by 2014/15. Critically:
  - All projects within the CMP are funded;
  - The CMP is underpinned by a rolling communications and engagement programme.
- The Trust has approved Energy and Incineration Strategies, which outline plans to maintain sustainable energy systems but also increase the Trust's resilience, increasing renewable energy production.
- The Trust Board has approved the business case for a combined heat and power plant on the New Cross Hospital site.
- The energy group has an ongoing programme for the identification and implementation of carbon reduction projects, which complement those identified in the CMP.

Where do we want to be?

Target	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Achieve an absolute reduction in the Trust's carbon emissions from stationary sources of at least 16% from the 2009/10 baseline, by 2014/15	0%	3.4%	6.8%	10.2%	13.6%	16%
Secure risk-adjusted carbon savings from energy projects within the carbon management plan	0	1,026 carbon tonnes	1,420 carbon tonnes	1,747 carbon tonnes	4,577 carbon tonnes	4,809 carbon tonnes
By 2015, achieve a score of "Excellent" in the energy use and carbon question of the Good Corporate Citizenship model		Getting Started	'Getting there'	'Getting there'	'Getting there'	'Excellent'

Note: carbon savings from energy projects identified in target above include energy savings from closure or demolition of estate as a resulting from implementation of the site master plan.

How do we get there?

Mitigation Plans

- Implement projects within the CMP, supplemented by additional activities identified through the energy group;
- Maintain on-site incineration, subject to annual review of the Incineration Strategy;
- Implement planned preventative maintenance regimes to ensure continued resilience of energy supplies to local buildings, supported, for example, through the introduction of steam trap monitoring;
- Identify and mitigate for impact of changes to service provision, staffing levels and estate portfolio as a result of Transforming Community Services;
- Ensure compliance with the European Public Buildings Directive, including public display of the energy usage and efficiency of buildings through Display Energy Certificates;
- Ongoing monitoring and review of contracts with energy suppliers to ensure optimum value for money;
- Appoint an active network of carbon champions to build engagement at local level and help reduce carbon emissions by changing the behaviours of staff, patients and public.

Adaptation Plans

- Implement a Combined Heat and Power plant, which will deliver the single greatest contribution to the reduction in carbon emissions;
- Develop plans for implementation of the longer term strategic vision for providing sustainable energy to its estate, including the potential introduction of a biomass boiler, anaerobic digestion;
- Continue to explore, pilot and implement other emerging renewable technologies, e.g. photo voltaics and voltage optimisation.
- Ensure compliance with relevant best practice guidance, including:
  - HBN 00-07 Resilience planning for the healthcare estate.
  - HTM 00 Best practice guidance for healthcare engineering.
  - HTM 07-02 Encode, making energy work in healthcare.

How will we know?

- Maintain accurate records of energy usage and direct carbon emissions across the site and monitor regularly usage of energy from all stationary sources, by energy type.
- Annual reviews of strategies and CMP informed by audit of carbon and energy emissions.
- Ongoing roll out of smart metering across the New Cross Hospital site.
- Continued vigilance through planned and reactive maintenance.
- Monitoring of heating degree days and on site temperatures on a monthly basis.

2.2 Procurement

The Trust's purchasing activity will seek to optimise the wider social and environmental benefits to society that can derive from effective purchasing decisions and efficient purchasing procedures.

The Trust will ensure that goods and services procured by the Trust are designed, manufactured, delivered, used and managed at end-of-life in an environmentally and socially responsible manner.

Where are we now?
- The Trust spent £57 million on supplies and services during 2009/10, rising to £63 million in 2010/11.
- The Trust has calculated a baseline carbon footprint of 40,835 tonnes of carbon from procurement activities as a result of the Trust's procurement activities in 2009/10, representing 68% of the Trust's calculated total emissions.
- The Trust's Sustainable Procurement Strategy (developed with consideration of the NHS Procuring for Carbon Reduction Roadmap (P4CR)) will ensure that goods and services procured by the Trust are designed, manufactured, delivered, used and managed at end-of-life in an environmentally and socially responsible manner.
- The Strategy is compatible with the Trust's Procurement Policy and the ongoing development of a modern purchasing function embracing sector wide best practice techniques.
- The Strategy is underpinned by a Sustainable Procurement Action Plan.
- Carbon management training has been introduced for all procurement staff, plus others who have a significant impact on procurement decisions.

Where do we want to be?

Target	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Reduce the CO_2 emissions from procurement activities by 10% from the calculated 2009/10 baseline footprint by 2014/15.	0%	0%	2%	4%	7%	10%
Work towards Level 5 of the Trust's Carbon Management Matrix by 2014/15	Level 3	Level 3	Level 3	Level 4	Level 4	Level 5
By 2015, achieve a score of "Excellent" (min. score of 7) in at least two questions in the Procurement area of the Good Corporate Citizenship model - or achieve a minimum of 70%.	'Getting there' or 37%	'Getting there' or 37%	'Getting there' or 39%	'Getting there' or 59%	'Getting there' or 69%	'Excellent' or 70%

How do we get there?

Mitigation Plans

- Engage with new and existing Trust suppliers and partners (including Health Trust Europe, the Department of Health and NHS Supply Chain) to help to reduce carbon, across supplies and estates management, including:
    - o Incorporation of sustainability terms in supplier contracts;
    - o Encouraging a culture of life cycle costing and environmental awareness in procurement decisions and processes;
- Review departmental policies and procedures to incorporate sustainability considerations, including training and induction plans, contract award criteria, and whole life costings.
- Implement materials management strategy, with a view to reducing stock holdings, waste and consolidation of orders and deliveries.
- Encourage the use of local suppliers and businesses in procurement.
- Review potential to reduce chemical use in products used by the Trust and its suppliers.

Adaptation Plans

- Encourage the use and development of sustainable and innovative technologies.

How will we know?

- Active contribution to the NHS Sustainable Procurement Forum to identify means to improve current carbon assessment techniques related to procurement;
- Annual review of the Sustainable Procurement Strategy and regular monitoring of the Sustainable Procurement Action Plan.
- Annual progress against the Strategy and Action Plan reported to the Trust Board as a public document.
- Requirement for and review of management information from suppliers as part of ongoing contract management and reviews.

Food

The Trust will promote sustainable and healthy food throughout the Trust, through its relationships with suppliers, food preparation and provision of support to patients, visitors and the public to make informed healthy eating choices.

Where are we now?

- In 2010/11 the Trust opened a new facility which moved from traditional to food prepared on site within a cook chill facility, reducing production time by approx 45% and enabling larger batch production. Increased refrigeration requirements have been offset by state of the art refrigeration units, new technology and insulation.
- The CPU serves some of retail units on New Cross Hospital and West Park site, as opposed to prior purchase of ready meals.
- Over 90% food suppliers are through or are approved by NHS Supply Chain, providing assurance on cost and quality, as well as consolidating deliveries. Local or regional suppliers of NHS Supply Chain approved products are used as policy, where possible.
- The Trust is purchasing fair trade items where available through NHS Supply Chain.
- There is a limited seasonable element of the menu, although this is mainly structured around clinical dietary requirements, supplemented by cultural requirements. Ward diet folders enable informed choices based on clinical need. A number of special diet individual dishes prepared on site and frozen in order to supplement the main menu where required based on clinical need or patient choice.
- There is a monthly operational catering group including matrons, dieticians and patient and PALs representatives.
- The Trust has a policy of promoting health food options and makes these available within on site vending facilities.

Where do we want to be?

Target	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
By 2015, achieve a score of "Excellent" in the healthy and sustainable food question of the Good Corporate Citizenship model		Getting Started	'Getting there'	'Getting there'	'Getting there'	'Excellent'

How do we get there?

Mitigation Plans

- Introduction of energy dense and healthy options identified on the menu.
- New tender for the contract for frozen vegetables to reduce deliveries and improve productivity, food quality and nutrient content. Supplier location will be a consideration.
- Continue to review means for the reduction and processing of food waste through an ongoing process of communication, review and monitoring of patient choice and menu allocation.

Adaptation Plans

- Encourage the use and development of sustainable and innovative technologies.
- Develop and implement a Sustainable Food Plan, including commitment to working with the government Buying Standards for Food and Catering Services.
- Extend catering facility to cover appropriate community facilities, enabling a step change from cook/freeze to cook chill and shift to more local supplier base, and extending Trust capacity to include modified moulding meals, which are currently externally sourced. Consider extending to other NHS facilities in order to maximise production capacity and off set carbon footprint.

How will we know?

- ERIC returns for food waste and Sustainable Food Plan.
- Monitor food waste and quality issues via computerised regeneration trolleys at ward level.

2.3 Low Carbon Travel, Transport and Access

The Trust will reduce emissions from staff travel on Trust business, patient and non-patient transport and staff commuting to and from the Trust, with the added aim of improving health and reducing congestion.

Where are we now?
- The Trust has calculated a baseline carbon footprint of 307 tonnes of carbon from travel and transport activities as a result of the Trust's travel and transport activities in 2009/10.
- The Trust has a Board approved Travel Plan (consistent with ERIC definition), which identifies proposed travel plan initiatives to encourage travel by sustainable modes for patients, visitors and staff. This reflects the requirements of the planning permission for the redevelopment of the hospital site and includes an associated car park management plan.
- The Trust completes an annual travel survey, the latest of which (2010/11) has identified an overall increase in the number of staff using sustainable travel options to get to work, but an increasing geographical spread in staff residence.
- The Trust has good public transport links and provides staff facilities and incentives that encourage alternatives to car use, e.g. cycle parking facilities, cycle to work scheme, travel card scheme, car sharing scheme and changing/shower facilities.
- The Trust has a good relationship with Wolverhampton City Council as the local planning authority and attends local transport planning meetings.
- The Trust promotes the use of public transport use and non-vehicular travel, e.g. by ensuring that all site maps highlight public transport options and through active promotion of alternative travel options for staff through its intranet site.

Where do we want to be?

Target	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Reduce the carbon emissions from travel and transport activities by 15% from the calculated 2009/10 baseline footprint by 2014/15 (56 tonnes of carbon).	0%	3%	6%	9%	12%	15%
By 2015, achieve a score of "Excellent" (min. score of 7) in at least two questions in the Travel area of the Good Corporate Citizenship model - or achieve a minimum of 70%.		35%	Confirm action plan. 37%	54%	65%	"Excellent" in at least two questions or 70%.

How do we get there?

Mitigation Plans

- Expand incentives for low carbon transport, including promoting the use of walking, cycling and low emission vehicles.
- Ongoing marketing of existing sustainable travel initiatives.
- Ensure staff and visitors have the tools to make an informed choice through the provision of personalised sustainable travel information and route planning, including launch of an internet site identifying alternative travel options for patients and the public, linked to the Trust's Wayfinding Strategy.
- Identify and mitigate for impact of changes to carbon emissions from transport and travel activities as a result of changes to staffing and service provision a result of Transforming Community Services;
- Award and ensure implementation of contracts to reduce carbon emissions from ambulance and other fleet vehicles owned or leased by the Trust.
- Ongoing review of Trust human resources policies with a view to promoting sustainable travel, e.g. car parking, essential car user scheme and mileage for business use.
- Review current patient and visitor car parking charging structure.

Adaptation Plans

- Consider options for the introduction of transport mechanisms within and between the New Cross Hospital, West Park Hospital and the Gem centre sites.
- Build knowledge and understanding of sustainable travel best practice through exploitation of training and development events.
- Consider sustainability issues when reviewing clinical pathways, identifying opportunities for low carbon models of care, e.g. through telemedicine or care closer to home.
- Work with local travel companies, including Centro, to influence changes in public transport routes and options.

How will we know?

- Annual travel surveys of staff, patients and the public.
- Annual review of the car park management plan to ensure fit between supply and demand.
- Annual review of the Travel Plan.
- Re-baseline carbon emissions from travel and transport to account for the impact of services transferring as a result of Transforming Community Services.
- Cross organisational representation on and monitoring by the Travel and Transport Group.

2.4 Water

The Trust will progress opportunities to reduce water consumption and consider opportunities for the storage and reuse of water where appropriate, taking into account the priority for safe storage and supply of water.

Where are we now?
- The Trust completed a flood risk assessment to underpin the environmental impact assessment for planning permission associated with the site redevelopment plan.
- The Trust continues to reduce plant leaks across site and where feasible implemented changes in working practices to reduce consumption and increase efficiency.
- The Trust has progressed a number of initiatives to reduce water consumption on site, which has reduced water consumption by 17.5% from 226,394m^3 in 2009/10 to 186,673 m^3 in 2010/11.
- The Trust has a legionella policy, which informs effective water management in line with clinical requirements and patient safety, and meets statutory health and safety requirements.

Where do we want to be?

Target	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
To sustain 2010/11 levels of water consumption per of 187,000 m^3 per annum to 2014/15.	N/A	187km^3	187 km^3	187 km^3	187 km^3	187 km^3
No outbreaks of legionella on the New Cross Hospital site.	0 outbreaks	0 outbreaks	0 outbreaks	0 outbreaks	0 outbreaks	0 outbreaks
A stretch target of a reduction of 5% water consumption by 2014/15 relative to 2010/11 levels	N/A	0%	1%	2.5%	3.5%	5%

How do we get there?

Mitigation Plans
- Implement energy saving measures including government led initiatives to reduce carbon emissions from water usage, subject to capital bid proposals where required.
- Carry out activities to minimise the risk of contamination or infestation of legionalla bacterium.

Adaptation Plans
- Informed by the flood risk assessment and planning permission for the site master plan, develop and implement biodiversity, water and chemical management strategies.
- Consider sustainability issues when reviewing clinical pathways, identifying opportunities for low carbon models of care, e.g. through telemedicine or care closer to home.
- Integrate systems for efficient use of water into building developments for new or refurbished buildings at the design stage.

How will we know?
- Ongoing data monitoring and inspection (planned, exceptional and ad hoc) of systems through manual or automated meter reading and on site inspection of various water system, whether conventional or specialised steam or condensed systems.
- Introduction of water metering on a building block basis.

2.5 Waste

The Trust is committed to a programme of waste reduction, reuse and recycling, which will embed changes of behaviour and practice by Trust staff, patients and public, and its waste contractor.

Where are we now?
- The Trust has completed a baseline assessment to determine compliance with regulations and confirmed systems are in place to allow the Trust to comply with its Duty of Care, including in relation to waste transfer on and off site;
- The Trust's Waste Management Policy (WMP) ensures the Trust's compliance with disposals in accordance with the national waste hierarchy and full implementation of the National Colour Coding System (NCCS) for segregation and packaging;
- The Trust has developed a local Waste Assessment framework based upon HTM07-01 and disseminated this across the Trust (supported by training).
- The Trust has confirmed that all licence/permit requirements and status for waste produced on site, off site and brought to site for incineration or any other treatment are current and appropriate.

Where do we want to be?

Target	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Achieve an absolute reduction in the Trust's carbon emissions from waste of 10% from the 2009/10 baseline, by 2014/15.	0%	0%	2%	5%	7%	10%
Departments to reduce their waste arisings by 25% by 2020 on 2009/10 levels.	0%	0%	3%	7%	11%	15%
Ensuring recycling levels are 40% of Trust's waste arisings by 2012/13 on 2009/10 levels.	0%	5%	30%	40%		
Achieve at least 20% of the total value of materials derived from recycled and reused content in the products and materials selected by 2012/13 for building projects.	0%	0%	12%	20%		
All building projects =>300k to have waste plans in place and contractors to report % of recycled waste.	100%	100%	100%	100% Report	100% Report	100% Report
By 2015, achieve a score of "Excellent" in the waste question of the Good Corporate Citizenship model		Getting Started	'Getting there'	'Getting there'	'Getting there'	'Excellent'

How do we get there?

Mitigation Plans

- In terms of waste storage, segregation and collection, ensure that the specific requirements of any recycler or compliance scheme with whom the Trust operates are clearly understood and implemented across the Trust.
- In relation to Waste Electrical and Electronic Equipment (WEEE), ensure that there is a clear understanding of the WEEE status of existing equipment, clarity of WEEE disposal responsibilities for all future procurement, all staff are aware of the issues surrounding WEEE, the cost implications of all new WEEE items are documented and understood and an appropriate WEEE audit trail is in place.
- Work with the Trust's Procurement Department and its suppliers to implement opportunities for reduction, reuse and recycling.
- Explore and define further means for the reduction of carbon emissions from pharmaceutical waste.

Adaptation Plans

- Identify markets and opportunities for recycling and promotion of opportunities for local recycling companies to participate in relevant tenders and waste management schemes.

How will we know?

- Routine waste audits across the Trust.
- Improve the availability of management data to enable monitoring of the cost and quality of waste.
- Annual reviews of the waste targets with a view to achieving absolute reductions in waste over time.
- Monitor contractor's compliance with contractual requirements for value of materials derived from recycled and reused content in the products and materials selected for building projects.
- Develop targets and monitoring mechanisms for contractors' recycled construction waste.

2.6 Designing the Built Environment

Sustainable buildings are buildings that are safe, healthy and productive for their users and owners, make a positive contribution to their local surroundings, and have a minimal impact on the local and global environment both today and for generations to come.

The Trust will develop new and existing buildings across its estate that staff, patients and the public consider to represent healing environments. It is also committed to rationalising the existing estate to reduce ongoing resource utilisation in line with clinical and service needs.

Where are we now?
- The Trust's estates strategy outlines a 'blue print' in the form of a Master Plan for the future site redevelopment over the next 20 years. Informed by the Trust's Clinical Service Strategy, the Plan seeks to make the best use of the newer existing buildings on site creating adjacencies in order to deliver service improvements and efficiencies. The Master Plan identifies:
  - Retained estate that will be unchanged will be brought up to an appropriate condition (given the constraints of the building) by the allocation of capital monies;
  - Retained estate that will be refurbished to new standards;
  - New build, built to new standards; and,
  - Site rationalisation through buildings demolition.
- The Trust is implementing its landscaping strategy linked to planning permission for the site master plan, which will increase and improve green space across the hospital site.
- The Trust is working with contractors to increase the use of recycled materials within developments and to implement a range of estate improvements across new and existing estate to reduce ongoing carbon emissions.

Where do we want to be?

Target	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
New and substantially refurbished healthcare buildings to achieve energy performance in line with the recommended measure of 35-55GJ/100m3 (and refurbished buildings (above capital investment of £2 million) to be 55-65 GJ/100m3) and shall include an element of energy generation from renewable sources.	100%	100%	100%	100%	100%	100%
All new developments will achieve a BREEAM score of 'excellent' and all refurbished buildings requiring capital investment above £2 million will achieve a BREEAM score of 'very good'.	100%	100%	100%	100%	100%	100%
All construction projects (=> £300,000 capital value) shall have 20% or higher recycled content.			12%	15%	18%	20%
All new healthcare buildings will aim to achieve a target of being low carbon by 2015 and ideally zero carbon by 2018.						100% low carbon
By 2015, achieve a score of "Excellent" (min. score of 7) in at least two questions in the Buildings area of the Good Corporate Citizenship model - or achieve a minimum of 70%.		37%	43%	52`%	54%	Excellent in at least 2 questions or 70%

How do we get there?

Mitigation Plans

- Design specifications for new hospital facilities and redesign of existing facilities to require a significantly lower carbon impact, including reduced energy usage and increased consumption of renewable energy sources.
- Enhance internal business planning processes to ensure sustainability issues are addressed within service and capital developments, including the introduction of whole life costings.

Adaptation Plans

- Consideration will be given to the impact of climate change and weather extremes in the design of all new buildings and refurbishments informed, for example, by the site flooding risk assessment.
- Use of the local Climate projections (UKCIP) to inform adaptation of future infrastructure developments or building renovation/ retrofit to cope with projected changes.
- Implement the DH Heatwave Plan for England: Protecting health and reducing harm from extreme heat and heat waves, May 2011.
- Ensure compliance with relevant best practice guidance, including:
  - o HTM 00 Best practice guidance for healthcare engineering.
  - o HTM 07-07 Sustainable health and social care buildings.
  - o HBN 11-01 Facilities for primary and community care services.

How will we know?

- Use and achievement of the BREEAM (Building Research Establishment's Environmental Assessment Method for Healthcare) standards and reports to the Trust Board on progress with major capital developments, the capital programme and the achievement of BREEAM standards.
- Actual reduction in energy usage and carbon footprint, monitored through business as usual energy data monitoring and business case benefits realisation plans.

2.7 Organisational and Workforce Development

The Trust will ensure that all levels of staff have the appropriate understanding, skills and accountability for support of and engagement with this Plan. The Trust is committed ensure clear allocation of senior management responsibility and to galvanising the support of its staff as change agents. Active support will be required if a true cultural shift is to be secured that will make a real difference to the environment and well-being of Wolverhampton.

Where are we now?
- The Trust has a Board approved human resources strategy, which includes recognition of the need to ensure a sustainable workforce.
- The Trust has agreed the inclusion of sustainability and carbon reduction in the Chief Executive's presentation within the Trust's induction programme for new staff;
- The Trust has completed a baseline carbon awareness survey to determine the level of interest and understanding of issues pertaining to carbon management, and help focus the communications and engagement plan.
- The Trust has designed and commenced implementation of an active rolling communications and engagement programme to support the Carbon Management Plan, and has initiated the development of a network of Carbon Champions.
- The Trust has equal opportunities policies and capability processes, including the ability to request flexible working and the guaranteed interview policy.
- The Trust and promotes vacancies through local routes, e.g. Job Centre and media outlets, as well as national vehicles.
- The Trust has established staff representation mechanisms, which are supplemented by more individual communication routes, e.g. Chat Back.
- The Trust has formal training and development processes, e.g. appraisal framework, supplemented by relationships with local academic institutions.
- The Trust promotes healthy and well-being for staff and provides counselling and occupational therapy services where required.

Where do we want to be?

Target	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
By 2015, achieve a score of "Excellent" (min. score of 7) in at least two questions in the Workforce area of the Good Corporate Citizenship model - or achieve a minimum of 70%.	N/A	37%	48%	52%	56%	Excellent in at least 2 questions or 59%
Number of carbon champions	N/A	N/A	20	30	50	60
80-100% new staff members receive sustainability awareness within induction or mandatory training	N/A	N/A	80%	85%	90%	98%
% of staff employees who complete annual sustainability and carbon awareness survey	N/A	4%	5%	8%	9%	10%

How do we get there?

Mitigation Plans

- Promote the development of leadership competences to deliver carbon reduction.
- Integrate sustainability and carbon management into the responsibilities of senior managers, including incorporation within job descriptions.
- Continued use of Chat Back as a local mechanism for sampling staff opinion, targeted at areas where further Directorate level information is required in order to inform local action plans and input into changes in working practices.
- Continue to deliver and enhance the carbon communications and engagement plan, extending to broader sustainability matters and regularly communicating to regularly communicating to staff, the external community (including patients) and key partners.

Adaptation Plans

- Implement the human resources strategy for integration of transferring community services staff into the Trust, ensuring that staff feel appropriately supported through the transition and continuation of provision of high quality patient care.

How will we know?

- Periodic use of the carbon awareness survey, supplemented by general and local indication compliance report;
- Monitoring mechanisms will be established in conjunction with the carbon champion network;
- Monitor employment patterns, including turnover and diversity and will commence more active monitoring of flexible working practices;
- National staff survey, supplemented by Chat Back.
- Monthly health surveillance schedule, including review of particular hazards.

2.8 Community Engagement and Partnerships

The Trust will be a visible leader in the local community on sustainability and climate change supporting reduction of the City's carbon emissions and will provide an active contribution to the national agenda where possible.

Where are we now?

- The Trust Board approved its patient experience strategy in May 2010. Consultation and involvement of patients and public is also progressed as outlined in the Trust's Public and Patient Engagement Strategy.
- The Trust has established its membership with over 7,000 members to date. Contact with Members is established via Newsletters, events etc.
- The Patient Experience Forum provides the mechanism for liaising with Trust patient and community representatives, informing the Quality and Safety Committee. The Trust has an established volunteer base, which complement Trust services and enhance the patient experience, supported by training for specialised support roles (e.g. patient buddies in the dementia ward and art volunteers).
- The Trust actively works in partnership with the Local Involvement Network (LINk), including reviews of Trust services, and liaises with local commissioners and the Overview and Scrutiny Committee (OSC). The Trust is also a member of the local strategic partnership and Wolverhampton Compact.
- Patients are also engaged on other specific reviews, e.g. PEAT assessments, and through a network of disease or service specific patient groups, which influence service delivery.
- Feedback from patients and service users is gathered regularly and used to shape improvements; the Trust Board and local commissioners are also kept informed of the feedback received.
- The Trust works collaboratively with other local partners, e.g. active support and training to care homes on infection prevention and joint appointments with NHS Wolverhampton to support patients with a learning disability experiencing acute service admissions.
- The Trust has made service improvements which increase access and responsiveness for patients with different languages, e.g. the introduction of a new interpreting service and access to documentation within alternative formats.

Where do we want to be?

Target	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
By 2015, achieve a score of "Excellent" in at least two questions in the Community Engagement area of the Good Corporate Citizenship model - or achieve a minimum of 70%	N/A	31%	Confirm action plan. 40%.	56%	67%	'Excellent' in at least 2 questions and 78%
Volunteer population representative of the Wolverhampton population, as defined by the Personal Protected Characteristics groups set out in the Equality Act 2010	N/A	N/A	Establish baseline based on 2011 census results			Representative volunteer population
% of patients who rated overall satisfaction good or excellent according to the local inpatient survey			90%	92%	95%	95%

How do we get there?

Mitigation Plans

- Commitment to identifying and working in partnership with all relevant stakeholders to ensure sustainability of services for the local community, both through adaptation to the social, environment and financial environment and through mitigation of the impact of its activities on climate change.
- Act as an exemplar low carbon, sustainable organisation, seeking views and involving patients and public in appropriate decision making.
- Establish incentives for members and volunteers to use public transport facilities.
- Develop and implement action plans to support the Equality Act and existing Trust single equality scheme. This will involve mapping and liaising with additional personal characteristic groups and ensuring that the Trust's service are fair and accessible to all parts of the local community.
- Train staff on managing compaints, building on mandatory and induction training consideration of patient experience.

Adaptation Plans

- Review and align volunteering approaches and patient and community engagement metrics / mechanisms reflecting the transfer of services associated with Transforming Community Services.
- Active engagement and assuming a more leadership role within local community and sustainability.
- Ongoing targeted involvement of patient and community groups for specific service developments, supplemented by attendance at commissioner-led area forums.
- Patient and community involvement in the development of priorities for and presentation of quality accounts.
- Ongoing collaboration with commissioners, other providers (including primary care) and community groups on the development of sustainable service level pathways, e.g. virtual ward and Wolverhampton Urgent Care Triage and Access Service (WUCTAS).

How will we know?

- Monthly patient survey of adult inpatient services through touch screen reporting of patient experience, with potential roll out to outpatient and community services.
- National annual inpatient survey with rolling maternity, outpatient and accident and emergency surveys.
- Analysis of feedback from complaints, compliments and PALs.
- Feedback from Patient Fora, community and service user groups.
- Monitoring of quality account priorities, reported to the Patient Experience Forum and LINk, and to the Trust Board on a quarterly basis, and published annually.
- Volunteer survey and develop formal metrics to identify the contribution from the volunteer base.

SECTION 3: Governance and Assurance

3 Governance Arrangements

Sustainable development and carbon reduction and are corporate responsibilities and are considered an inherent part of the Trust's performance and governance mechanisms. The Trust is committed to complying with all applicable environmental legislation as well as other relevant non-statutory requirements.

Where are we now?
- The Trust Board recognises sustainable development and carbon reduction as a corporate responsibility, and has established governance structures reflecting this.
- The Trust has completed self assessments and set future targets for improvement against the Carbon Trust matrix for embedding carbon management and the NHS route map for sustainable health.
- The Trust was been committed to the use of the Good Corporate Citizenship assessment model in 2007/8 when it completed its baseline self-assessment.
- The Trust transitioned to the revised, and more challenging model during 2010/11. The Trust's updated assessment showed an improvement from 35% in April 2010 to 38% in January 2011, exceeding the national target of an average score of 37% for 2010/11.
- The business case policy has been amended to require consideration of carbon implications of service or capital developments.
- The Trust has a register of relevant environmental legislation and regulatory requirements.

Where do we want to be?

| Target	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
By 2015, achieve a score of "Excellent" (min. score of 7) in at least two questions in each area of the Good Corporate Citizenship model - or achieve a minimum of 70%.		"Getting there" in at least two and 37%	"Getting there" in at least two and 40%.	55%	65%	Score of "Excellent" in at least 2 questions in each area of the model - or a minimum of 70%.
Carbon Trust matrix for embedding carbon management	Range 1-3	Range 2-3	Range 2-4	Range 3-4	Range 4-5	5 in all areas

How do we get there?
- Carbon literacy, carbon numeracy and carbon governance will be embedded, promoted and scrutinised using similar approaches to those used for financial and clinical governance.
- As government and NHS targets are reviewed and the means for ensuring consistent data collection evolve, they will be incorporated via the review mechanisms embedded within the governance structure.
- Periodic review of the Trust's register of relevant environmental legislation and regulatory requirements to support compliance. Environmental legislation will be monitored by relevant staff in specific areas, with updates collated within the central register.
- Establish an Environmental Management System as an effective means to control and mitigate the Trust's environmental impact. The Environmental Management System will adopt the philosophy and framework of the international standard for such systems, ISO14001 but it not currently proposed that the Trust become ISO accredited.

How will we know?

- Bi-annual reviews against the Good Corporate Citizenship Assessment model, the NHS Route Map for Sustainable Health and the Carbon Trust matrix for embedding carbon management.
- Annual review of the overall SDMP from the 2009/10 baseline position on an annual basis.
- The results from these reviews will inform ongoing action and reports to the Trust Board and public annual reports.

Figure 2: Sustainability and Carbon Reduction Accountability and Governance Structure
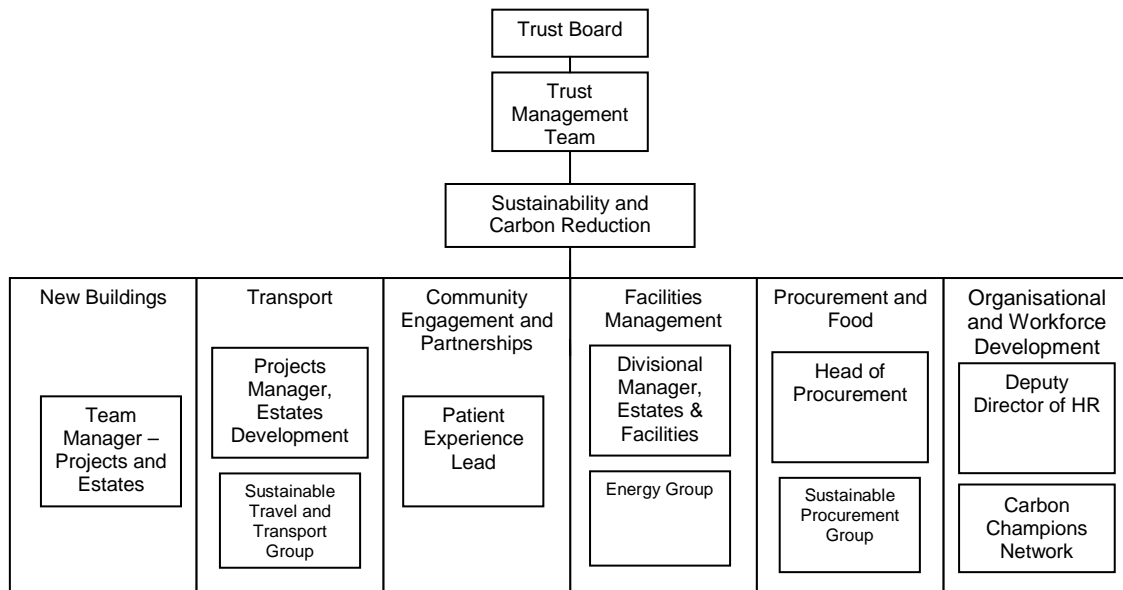
4   Financial Implications

The Trust will consider carbon implications within financial assessment and will utilise funding and allowances, including taking advantage of energy efficiency initiatives, where available to meet its sustainability goals.

Where are we now?
- The Trust is committed to participating within the Carbon Reduction Commitment (CRC) (the mandatory emissions trading scheme) and will cease participation within the European Emissions Trading Scheme (EUETS) from 2013, with all emissions required to be considered through the CRC.
- The Trust has confirmed capital and revenue funding for initiatives within the Carbon Management Plan and has committed to consider projects which have a payback period of at least seven years, with a longer period considered on an exceptional basis.
- The Trust participates actively in national, regional and local economic forums with a view to support the development of a sustainable and resilient health economy.

Where do we want to be?

Target	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Risk-adjusted annual cost saving from carbon reduction projects	£0	£174k	£240k	£301k	£662k	£702k

How do we get there?
Mitigation Plans
- All business cases which require Board consideration will be informed by whole life cycle costing.
- Impact assessments will be undertaken for proposed service developments and changes to models of care.
- Extend the Trust's business case policy so that the financial analysis ensures that links between costs and carbon intensity are defined and inform decision making.
- Given the dynamic nature of the CMP, continue to review the scope and phasing of projects against the residual sum identified as unallocated funds.
- Seek opportunities to utilise funding available for energy efficiency and mitigate any potential financial pressures from schemes such as the CRC.

How will we know?
- Monitor carbon impact as part of the benefits realisation process for relevant internal business cases.
- Annual review of carbon emissions, reported to the Trust Board and the Carbon Trust.

5 Accountability and Reporting

The Trust considers that it has made significant progress in certain areas across the sustainability agenda and has a clear plan for progression; however, there remain opportunities for improvement. It is committed to active review and scrutiny to maintain public accountability.

Where are we now?
- The Trust Board has approved the sustainable development mission (see section 1.1).
- The Head of Estates Development has delegated responsibility for sustainable development, reporting through the Director of Finance and Information.
- The Sustainability and Carbon Reduction Group (SCRG) is responsible for monitoring and implementation of this strategy, reporting to the Trust Board.
- The SCRG includes representation from across the Trust with identified leads for each work stream and is responsible for the development and implementation of the action plan to support this SDMP.
- Each work stream has an annual action plan, which includes specific, measurable actions, responsibilities for delivery and timescales.
- The Head of Estates Development has designated responsibility for risk assessment and management relevant to this strategy, responsible for identifying and escalating risks in line with the Trust's risk policy and procedures to the corporate risk register, Board Assurance Committee (and ultimately Trust Board). The current risk assessment is summarised in Annex 3.
- Progress is reported through the Head of Estates Development quarterly report to the Trust Board and within the Trust's annual report (and accompanying Statement on Internal Control), both of which are public documents.

How do we get there?

Mitigation Plans
- Action plans to support the implementation of this SDMP will be informed by engagement with partners across the local health system and with public and patients.

Adaptation Plans
- Maintain an iterative climate change risk assessment process as part of the corporate risk appraisal.
- In relation to environmental risks:
  - Enable the Trust to make evidence based decisions and identification of opportunities;
  - Ensure explicit consideration of uncertainty and response;
  - Support the generation and prioritisation of actions; and,
  - Enable monitoring and evaluation of adaptation responses.

How will we know?
- The SCRG will ensure ongoing review and update to action plans by the workstream leads, with formal review by the Sustainability and Carbon Reduction Group on at least a bi-annual basis.
- Monitoring of corporate risk through the Board Assurance Committee and ultimately the Trust Board, informed by a programme of internal audit.

Appendix 1: The Sustainable Development Management Plan as a Coordinating Framework

SUSTAINABLE DEVELOPMENT MANAGEMENT PLAN

	Governance	Procurement	Travel & Transport	Built Environment	Facilities Management			Workforce	Community Engagement
					Energy	Waste	Water		
Strategy				Estates strategy					
Strategy	Business Continuity Strategy Environmental Strategy Integrated Governance Strategy	Sustainable Procurement Strategy	Sustainable Travel Plan		Energy Strategy Incinerator Strategy				
Policy / Framework	Good Corporate Citizenship model Risk Policy Information Governance Policy Business Case Policy			Environmental Policy	Energy Policy	Waste Minimisation & Management Policy Waste Disposal Policy			
Operational Plans	Carbon Management Plan								
Operational Plans		Sustainable Procurement Action Plan	Travel Action Plan						
	Head of Estates Development	Head of Procurement	Projects Manager – Estates Development	Team Manager – Projects	Head of Facilities	Head of Commercial Services	Head of Facilities	Human Resources Manager	Patient Experience Lead

Annex 1 – Good Corporate Citizenship Model

Annex 1 Good
Coporate Citizenship

Annex 2 – Register of Relevant Legislation and Regulatory Requirements

Annex 2 Register of
Relevant Legislation a

Annex 3 –Summary Risk Assessment

Risk No	Workstream	Risk	Proximity	Likelihood	Consequence	Grade	Mitigation/Adaption Response
001	All	Extreme weather events (flooding, heatwave, tornado, volcano etc.)	0-5 years	**D**	**4**		Business continuity plans
002	Built Environment	Disruption to ICT systems and data	0-5 years	**B**	**4**		Design specifications. Appropriate heat cooling.
003	Built Environment	Fitness for purpose of existing accommodation	5-10 years	**B**	**4**		Demolish, adapt, refurbish
004	Built Environment	Capacity to respond to surges in demand	0-5 years	**B**	**4**		Identified flexible capacity
005	Built Environment	Physical stock ability to withstand temperature extremes	0-5 years	**C**	**4**		Design criteria. Assessment of existing stock's ability to cope. Manage and resolve during planned refurbishment. Include response to heat extremes within Heatwave Plan.
006	Built Environment	Design standards negative impact on carbon management	0-5 years	**B**	**3**		Choice of materials and considered review of design specifications. Influencing and networking.
007	Community	Local service planning and design does not take climate change evidence and impacts into account	0-5 years	**C**	**4**		Services designed with consideration of the impact of and their impact on carbon and sustainability issues. Health prevention and well-being included within service pathways.
008	Community	Provision of health service does not match demand for treatment of an increased type/scale/range of disease	0-5 years	**C**	**4**		Services designed with consideration of the impact of and their impact on carbon and sustainability issues. Health prevention and well-being included within service pathways.
009	Community	Cost pressure on community e.g. from fuel poverty, increases health issues	0-5 years	**C**	**3**		Education materials for patients and public. Service planning to anticipate response.

010	Energy & Carbon	Disruption in the supply of energy (gas or electricity) - brown or black outs	0-5 years	C	4	🟧	Increase own power generation. Improve resilience for essential function. Schedule essential and high impact services for times to avoid brown or black outs
011	Energy & Carbon	Cost of energy	0-5 years	A	4	🟥	Reduce use, smart metering to enable targeted action, procurement contracts
012	Energy & Carbon	Disruption in the supply of fuel	0-5 years	C	2	🟨	Alternative fuel sources. Low emissions vehicles.
013	Energy & Carbon	Distribution costs of energy	0-5 years	A	3	🟧	Reduce imported electricity
014	Energy & Carbon	Carbon costs	0-5 years	A	4	🟥	Reduce imported gas and electricity
015	Energy & Carbon	Demand of and reliance on technology	0-5 years	A	3	🟧	Power saving technology. Purchase low technology equipment where possible. Change in human behaviour. Smarter utilisation of existing assets.
016	Energy & Carbon	Climate control	0-5 years	A	3	🟧	Building design and existing stock. Lock down set points.
017	Energy & Carbon	Service increase beyond 3% per annum	0-5 years	C	4	🟧	Increased utilisation of assets. Service design.
018	Finance	Resources are not prioritised and allocated effectively to take account of climate change evidence and impacts	0-5 years	C	3	🟧	Finance leadership of sustainability agenda, Board support, business case policy includes sustainability and carbon
019	Finance	Availability of resource to invest in plans to mitigate carbon impact	0-5 years	C	3	🟧	Ongoing justification of return on investment. Continued Board commitment to the Sustainability and carbon management agenda. Identified component within capital programme.
020	Food	Disruption in the supply chain of food (quality or quantity)	0-5 years	C	3	🟧	Alternative food suppliers, adapt menus
021	Food	Food shortages	5-10 years	C	2	🟨	Adapt menus.

022	Food	Food cost above inflation	0-5 years	A	4	🟥	Adapt menus.
023	Governance	Internal policy development does not take climate change evidence and impact into account	0-5 years	B	2	🟨	Ongoing policy review
024	Procurement	Procurement and supply of services does not take climate change evidence and impacts into account	0-5 years	C	3	🟧	Sustainable procurement policy, training
025	Procurement	Costs of goods and services	0-5 years	A	4	🟥	Reduce, reuse, recycle. Understand whole life cycle impact.
026	Procurement	Disruption in supply of goods and services	5-10 years	C	3	🟧	Contingency plans, including consideration of stock supplies. Second supply routes and use of generic products wherever possible.
027	Procurement	Conflict in priorities between price and carbon impact	0-5 years	A	3	🟧	Leadership support for sustainability policy
028	Procurement	Changes in policy restrictions counter to sustainability and carbon strategy	0-5 years	C	3	🟧	Life cycle policy internally. Influencing national policy
029	Travel	Disruption to public transport system – public transport	0-5 years	C	2	🟨	Continued work with local authority and other partners.
030	Travel	Disruption to transport system – road network	0-5 years	C	2	🟨	Continued work with local authority and other partners.
031	Travel	Travel cost	0-5 years	A	3	🟧	Positive incentives through transport scheme. Car parking policies.
032	Travel	Retention of staff due to increased cost of travel	0-5 years	C	2	🟨	Flexible working. Work from home policies.
033	Travel	Demand for use of patient transport services	5-10 years	C	3	🟧	Policy restrictions.

034	Waste	No identified risks	N/A				
035	Water	Disruption in the supply of water	5-10 years	**D**	**4**		
036	Water	Cost of water	0-5 years	**A**	**3**		Reduce consumption. Smart metering. Continued management of leaks. Recycling where appropriate.
037	Water	Water quality	5-10 years	**D**	**4**		Legionella policy and increased testing.
038	Workforce	Workforce understanding of climate change	0-5 years	**A**	**3**		Communication and engagement plan. Carbon champions. Training and development. Positive and negative incentives.