Luton & Dunstable Hospital NHS Foundation Trust

Sustainable Development Management Plan

March 2010

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1. Foreword

We at Luton & Dunstable Hospital NHS Foundation Trust ('the Trust') are passionate and committed about making sustainable development an integral part of our day to day activities. We pride ourselves as being at the forefront of innovation, achievement and are leaders in patient safety initiatives and now our focus is on becoming leaders in sustainable development within the NHS.

Over recent years, the impacts caused by climate change such as adverse weather conditions are becoming ever more evident. These impacts can cause significant disruptions, affecting each and every one of us. We all, therefore, have a role to play in reducing the Trust's carbon footprint for a brighter and sustainable future.

We recognise we have a major contribution to make in significantly reducing our carbon footprint (in line with the national targets) through the better use of our natural resources such as energy, water, and through the way we procure goods and services.

With the demanding financial and operational challenges we face, we see that there are three fundamental drivers for change (cost efficiencies; external regulation and meeting the national targets; and an ethical imperative). We believe there will be a number of benefits to enable us to work in a more sustainable way and this will help us to create services that will look radically different in the future.

We want to put in place the mechanisms for our staff, patients, visitors and other relevant stakeholders to help us achieve our goals. There is already a regular programme where our Board of Directors 'walk the floor', which now have a greater focus on picking up sustainability matters and is an effective mechanism for raising the awareness of sustainability across all levels at the organisation.

This Sustainable Development Management Plan set outs our strategy, vision alongside short and medium term targets into one document. It also details the challenges we face and the journey we need to take in order that we embed sustainable development into our day to day activities to enable us to reduce carbon emissions in line with national targets over the coming years.

Spencer Colvin
Chairman

Stephen Ramsden
Chief Executive

2. Executive summary

Sustainable development and the need to address climate change has never before attracted so much attention. Given the growing level of legislation and the ambitious national targets set by the government to reduce carbon emissions by 80% by 2050, the Trust is fully committed not only to reduce its carbon footprint but to identify new ways of working to realise efficiency saving opportunities to be more sustainable in the longer term. Sustainable development is one of the Trust's top prioritises.

Contained within this document are a number of initiatives and challenges that the Trust faces in its journey to become more sustainable. Our staff, patients and relatives have a critical role in our achievement to reduce the Trust's carbon footprint as well as helping to reduce energy and water consumption.

A summary of the key points detailed within this document, includes:

- The Trust's existing **governance arrangements** will be further strengthened to ensure that sustainable development is given the highest level of focus across all levels of the organisation. This will include setting up a Sustainability Steering Group who will be responsible for assessing the Trust's progress against the local and national targets. The Trust has committed to sign up to the 'NHS Good Corporate Citizenship Assessment' as an immediate priority and will continue to raise the profile of sustainable development at every opportunity.

- Developing **patient pathways** that are sustainable is a key strength for the Trust. It has a track record of working with other organisations on a whole health economy basis to improve the quality of care, provide care nearer to home and in doing so this will help to drive the efficiency and sustainability agenda forward.

- **Procuring goods and services** accounts for approximately 60% of the carbon emissions produced by the NHS each year. This will be a priority area for review over the next six months.

- A 10% **reduction in carbon emissions** by 2015 (from the 2007 baseline) is one of the key milestones for the Trust. However, the Trust has set itself a target to reduce its carbon emissions by 3% each year. This will be achieved through a reduction in utilities (the use of gas and electricity) of the same amount.

- Although the Trust has one of the lowest **water** costs per m^3, there are still further opportunities to reduce and recycle water. The initial focus will be to introduce the quick wins, which are set in the main body of this report as well as looking at the opportunity to harvest rainwater which can be collected and recycled for use within the hospital.

- Over the past 12 months, the Trust's cost on **waste disposal** has increased significantly and is above the average compared to other comparable trusts. Opportunities are being considered to look at ways of reducing this cost as well as the carbon emissions that waste produces. One NHS Trust (see case study examples set out in Appendix B) has recently been successful in turning clinical waste into building materials. The Trust is keen to understand more about this initiative and whether this practice could be replicated at the hospital.

- **Travel and transportation** poses a significant challenge for the Trust over the coming months. A number of initiatives are currently being considered to encourage more staff to share car journeys. In the longer term, the construction of the Luton and Dunstable Busway will have a number of environmental and sustainable benefits.

- The Trust's current **estate** poses a real challenge to sustainable development at the same time as being cost effective. The real benefits will be with the new developments that are planned in the coming months that can be built in the most sustainable way in line with good practice guidance detailed within the NHS Carbon Reduction Strategy (NHS CRS).

- As mentioned before **staff, patients and relatives** will be critical in the Trust's success in achieving its carbon emissions targets. Well thought through internal and external campaigns working with other stakeholders will be crucial to the Trust's success.

- **Partnership working** in the wider context of sustainability is recognised as an area that requires further investment in order that the full benefits of partnership working is fully realised.

- It is planned that the HM Treasury and Monitor will require the Trust to publish financial and non-financial **information on sustainability**. In addition, the Trust will need to commit resources to ensure compliance with the new Energy Efficiency Scheme as well as identifying alternative funding solutions rather than having to rely solely on the Trust's capital programme will be a key priority in the next 12 months.

3. Introduction

What is sustainable development?

Sustainable development is defined as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs[1]'. More simply, the dictionary defines sustainability as 'the capacity for continuance into the long-term'.

Why focus on climate change and sustainability?

Climate change presents a significant threat to the Trust, its staff, patients and visitors. An understanding of its causes and effects is critical to the Trust's approach to sustainable development. Climate change is driven by emissions of carbon dioxide and other greenhouse gases. In this Sustainable Development Management Plan (SDMP), the term 'carbon emissions' is used to describe such greenhouse gases. The Government, NHS and emerging Monitor policy is to mitigate climate change through the reduction of carbon emissions.

In addition, other areas of environmental sustainability are also addressed in this SDMP, in line with the wider aims of the NHS Carbon Reduction Strategy (CRS) for England, 'Saving carbon, improving health' which was published in January 2009[2]. These include measures to reduce waste to landfill and making better use of other natural resources such as water.

What are the drivers for change?

There are three fundamental drivers for change in tackling sustainable development and these are:

1. The need to identify and realise cost efficiencies;

2. The need to comply with the external regulation and achieve the national targets to reduce carbon emissions; and

3. There is an ethical imperative and we believe it is the right thing to do.

We explore each of the three drivers for change in more detail below and where applicable highlight these within the relevant sections of this SDMP.

Identification and realisation cost efficiencies

One of the seven principles of the NHS Constitution for England is to provide 'best value for taxpayers money and the most effective, fair and sustainable use of finite resources[3]'. Through the better use of our natural resources we will be able to realise cost efficiencies across the Trust's operational arrangements, which is in line with the Quality, Innovation, Productivity and Prevention (QIPP) agenda. There are also a number of important reasons why we need to identify and realise cost efficiencies from our day to day

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[1] UN Environment Programme Bruntland Report, 1987.

[2] www.sdu.nhs.uk

[3] The NHS Constitution for England, 'The NHS belongs to us all', NHS, 21 January 2009.

activities as follows:

- *Increased costs* – Projected trends in market prices and taxation levels will see the cost of energy, waste disposal and water increase over the medium and longer term. The Trust currently spends over £1.5m on energy each year, with £353,000 spent on waste disposal and a further £140,000 spent on water.

- *The Carbon Reduction Commitment Energy Efficiency Scheme* (CRC EES)[4] – From April 2010, the Trust will qualify for this scheme. Initial estimates show that when the scheme commences this will also increase the cost of energy with further rises possible in subsequent years. Responding to this challenge, the Trust has already developed a CRC EES implementation plan, which incorporates all of the actions required in readiness for the new scheme.

- *Achieving value for money* - The recent recession has impacted upon public spending and serves to reinforce the need for the Trust to demonstrate economy, efficiency and effectiveness in its use of resources. This not only involves obtaining value for money in the goods and services we procure and deliver, but there is also a need to find both financial and environmental efficiencies. By embedding sustainability considerations in everything we do, the Trust will save money that can be re-invested into frontline services or could be used to redesign patient pathways, services or treatments.

The need to comply with external regulations and to achieve the national targets to reduce carbon emissions

The NHS Carbon Reduction Strategy (CRS) for England, 'Saving carbon, improving health' was published in January 2009. This strategy sets out a number of demanding requirements for NHS trusts to achieve. Monitor has endorsed this strategy, which indicates the need for sustainable development to be integrated into organisations in a rigorous and auditable way. The Trust is signed up to become one of the leading Foundation Trusts (FT) in sustainable development. This will be achieved by enacting, with purpose and urgency, the demands that the NHS CRS has made.

In 2009, Her Majesty's (HM) Treasury and Monitor consulted on amendments to financial reporting requirements that will mandate sustainability reporting by all FTs from 2009/10. Carbon emissions, waste production and the use of water will be reported in the Trust's annual report. In following years, it is also likely that external assurances will be required on the reported figures that will be published.

There is an ethical imperative and we believe it is the right thing to do

The principles of sustainable development are also aligned with the strategic objectives for the NHS, which seek to narrow the health gap, prevent illness and improve health and well-being.   We strongly believe that being more sustainable is ethically the right thing to do.

What is a Sustainable Development Management Plan (SDMP)?

This SDMP is a direct response to the requirements of the NHS CRS, which has been endorsed by Monitor and where climate change and carbon management are central themes. A coherent SDMP is an important step in demonstrating the Trust's commitment and approach to sustainable development that is sensitive to the three fundamental drivers for change set out above.

Delivering this SDMP requires sponsorship at the highest level to ensure that there are sufficient resources, capability and funding made available. Our Chief Executive has taken on the role of Sustainability & Corporate Citizenship Champion and will be supported by the nominated Non-Executive

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[4] All public and private sector organisations who consume more than 6,000 MWh of electricity per year through half hourly meters, approximately equivalent to an annual £500,000 electricity bill will be included in the new CRC EES.

Director Sustainability Lead together with other relevant key staff as appropriate.

This SDMP will also be linked to the Trust's existing overall strategic aims. Over the longer term, the Trust recognises the need to develop its broader strategic plans to integrate the targets and principles set out in this document and the policies that influence it. This plan will, however, focus on the short and medium term actions which need to be taken now.

This plan will be integrated with Monitor, NHS and local priorities as appropriate. It will also utilise the support and guidance provided by the NHS Sustainable Development Unit (NHS SDU) and other Government bodies.

The key aims of this SDMP are to:

- Raise the profile of sustainable development within the Trust;

- Articulate what sustainability means for the Trust;

- Establish a governance structure that embeds sustainability considerations into the Trust at all levels;

- Identify the sustainability principles that the Trust should consider in developing policy and other projects;

- Form a coherent approach in costing the benefits of sustainability investments (including value for money);

- Highlight the sustainability principles for assessing future business cases;

- Articulate clearly how our actions will contribute to overarching goals; and

- Develop SMART (specific, measurable, agreed, realistic and time based) targets.

The following sections include the key areas highlighted by the NHS CRS as being important areas to enact an SDMP. It also includes the tools to help facilitate and achieve a reduction in carbon emissions and these have been set out in the relevant appendices.

Throughout this plan, we have articulated a number of 'quick wins' (which have been set out within our high impact actions in Appendix A), together with all of the key points needed to be taken forward. Appendix A will be used as the basis for future monitoring of this plan's implementation. In addition, a number of actions made in this report cover a number of sections e.g. the Luton and Dunstable Busway is not only a transport consideration but also forms part of being able to strengthen the Trust's partnerships arrangements. Where this occurs, the action will feature in the most prominent section of the action plan (set out in Appendix A), to ensure we do not duplicate the action being made.

Example case studies

Set out in Appendix B is a number of example case studies from both the public and private sector on sustainable development. These show the wide range of ideas which are helping to reduce carbon emissions and realise cost saving opportunities.

4. Governance

Overall responsibility

Responsibility for the delivery of the Trust's SDMP will rest with the Chief Executive, as the Sustainability & Corporate Citizenship Champion. This ensures that the strategy has ownership at the highest level of the organisation.

Governance arrangements

In order to strengthen the Trust's existing governance arrangements in line with the NHS CRS requirements, a small, yet focused Trust-wide Sustainability Steering Group (SSG) will be established. The SSG will be chaired by the Chief Executive with representatives from clinical and non-clinical staff. The Trust has already appointed a Non-Executive Director as its Sustainability Lead who will work closely with the Chief Executive and be part of the new SSG.

The SSG will be charged with ownership of this plan, its targets and actions. Progress will be monitored against the actions set out within this plan and new actions will be developed if performance trends are not in line with targeted trends. The following areas and individuals should be represented at the new SSG:

- Chief Executive
- Human Resources
- UNISON

- Estates
- Information Technology (IT)
- Non-Executive Director Sustainability Lead

- Procurement
- Clinical Directorates
- External organisations and stakeholders as appropriate

- Finance
- Communication

Establishing our SSG will enable us to align our overarching sustainability objectives and have a clear chain of reporting and accountability.

One of the first actions of the SSG will be to scrutinise the recommendations from the Trust's *Downside planning – Transformation Plan*. Many of the recommendations for financial sustainability made through this programme will also lead to environmental sustainability benefits as detailed below:

- *Sweating assets -* Using buildings and other high cost assets to maximum potential is consistent with and dependent on using natural resources, such as energy and water more efficiently.

- *Estates rationalisation -* Operating an excessive estate footprint involves a waste of natural resources.

- ***Hospital reconfiguration and reduced hospitalisation -*** Low carbon patient pathways are those that use efficiently configured hospital sites and do not unnecessarily hospitalise patients.

- ***Removing overlap in services -*** Low carbon patient pathways require close partnership with local councils and community health care providers to ensure that services are not unnecessarily overlapping.

A Sustainable Champion will be recruited and will act as secretary to the SSG. He or she should coordinate full meetings at least quarterly, as well as sub-groups on an ad-hoc basis to discuss specific issues that may arise.

In order for this high level forum to drive change on the ground, sustainability leads will be appointed locally within departments, consisting of staff who have a personal interest in sustainable development. This champion group will be facilitated by the Sustainability Champion and will be tasked with achieving initiatives adopted by the SSG.

As recommended in the NHS CRS, the Trust will also include sustainability performance reporting as a standing item on the Trust Board agenda in order to make it 'an inherent part of … performance and governance mechanisms'. Discussions will be informed by the inclusion of sustainability data in the monthly finance report (see section 14 for further details).

The risk register

The Trust also recognises the importance of identifying the impacts that climate change and the challenges of sustainable development will have on the organisation. These impacts and the way we will need to adapt to the changing climate and sustainable development will form part of the Trust's risk register and Board Assurance Framework.

NHS Good Corporate Citizenship Assessment

As a matter of urgency, the Trust will also sign up to the NHS Good Corporate Citizenship Assessment[5]. This is a self assessment tool for NHS trusts developed by the Sustainable Development Commission (SDC). This will help to identify and assess the Trust's contribution as a good corporate citizen, focusing on carbon emission and other areas such as community engagement, travel and employment. The Good Corporate Citizenship model is a tool that will help us to understand our contribution to sustainable development through decision making and purchasing decisions. It follows the five principles of the UK Sustainable Development Strategy, Securing the Future (2005) and is set out below:

Source: SDC.

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[5]http://www.corporatecitizen.nhs.uk
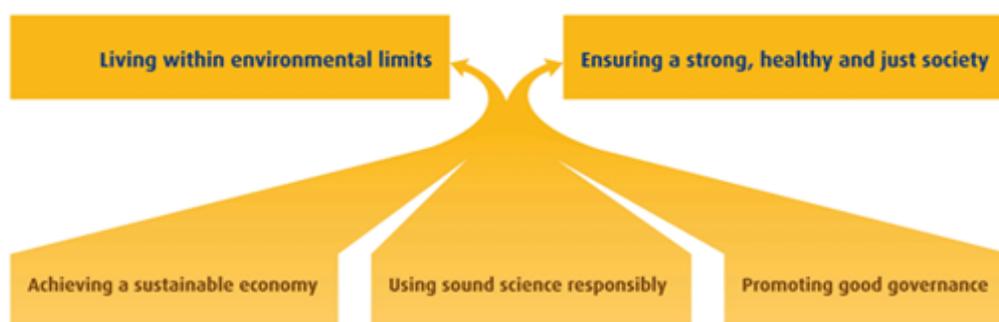
National performance targets

In keeping with Government, NHS and Monitor policies, the Trust has set itself specific carbon reduction targets which are consistent with the Climate Change Act and as a minimum include a:

- 10% reduction from the 2007 baseline by 2015;

- 26% reduction from the 1990 baseline by 2020;

- 64% reduction from the 1990 baseline by 2030; and

- 80% reduction from the 1990 baseline by 2050.

Targets for other individual sustainable development areas are set out throughout this document. Performance against these and other relevant targets will be monitored by the SSG on a monthly basis. The Trust's performance will be reported to the Trust Board and will be included within the Annual Report (see Section 14 - Finance and reporting for further details).

Local performance targets

In addition, to the above national targets, the Trust has signed up to reduce its carbon emissions by 3% each year (from the 2008 baseline). This is likely to be achieved through a reduction in utilities consumption (e.g. gas and electricity) by the same amount.

Rising awareness of sustainable development

This SDMP serves to raise the awareness of sustainable development and articulates the Trust's approach in the short and medium term. In addition, we see that our well established regular programme of 'walking the floor' by members of the Trust Board, which now has a greater focus on picking up sustainability matters. This will be one of the vehicles to help raise the awareness of sustainability across all levels at the organisation.

Furthermore, we will update our job descriptions and use the annual appraisal process to inform staff of their responsibilities pertaining to the achievement of the national carbon emissions targets. We see that everyone has a contribution to make and will be collectively responsible for achieving the national targets to reduce carbon emissions. A mechanism will be developed and put in place that recognises and rewards those who introduce initiatives to reduce carbon emission (see Section 13 - People and communication for further details).

Delivery plans and monitoring

The key sustainable development areas covered by the Trust's targets such as the reduction in carbon, water and waste will require the development and maintenance of robust delivery plans. These delivery plans should be developed by the Sustainability Champion (in conjunction with the appropriate Sustainability Leads for each area) and approved by the SSG. These delivery plans will be complemented by the initial actions highlighted by this SDMP and set out in Appendix A. In addition, the delivery plans should be further supplemented by other, detailed actions developed as the Sustainability Champion has gained familiarity with the detailed aspects of the Trust's estate and operational arrangements.

In addition, the Sustainability Champion should calculate the trends in sustainable developments that are required to achieve the national and local targets to reduce carbon emissions. Actual trends set alongside planned performance should be reported periodically to the SSG and the Trust Board (see example in figure 1 overleaf). Where progress is insufficient to meet the desired goals, the Sustainability Champion will present amendments to the SSG to supplement the delivery plans and take remedial action working closely with the relevant Sustainability Lead.

Figure 1: Required versus actual trend analysis
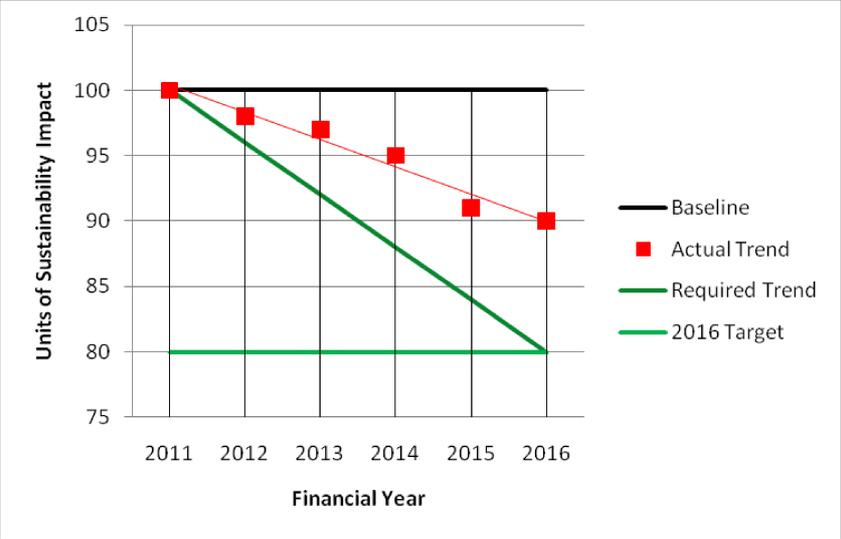
5. Patient pathways

Background

The Trust is committed to excellence and prides itself in delivering the highest levels of quality care and patient outcomes. Patient safety is of the highest priority and the Trust is striving to be one of the safest hospitals in the country. For this standard to be maintained over the longer term, its achievement in the short term must take account of the effects of sustainable and low carbon patient pathways.

National perspective

The Lord Darzi's report 'High Quality Care for All'**[6]**, recommended that patient pathways should be redesigned to make them more modern, efficient and sympathetic to the needs of patients. Sustainability cuts through all three of these criteria, including:

- A **modern** care pathway should account for all of its sustainable impacts;

- An **efficient** pathway needs to use finite resources effectively and sustainably in order to be sympathetic to patients; and

- A pathway must 'future proof' itself to meet the **needs of patients** both now and going forward.

It is anticipated that the revision of patient pathways in accordance with the Darzi report will see benefits in relation to the Trust's sustainability targets. For example, the Trust has already combined a number of outpatient appointments for its bariatric service (see case study two on page 15). This has helped to reduce the pathway's carbon footprint through the reduction in transport emissions as well as a financial saving by combining non-emergency patient journeys. The initial priority for combining these appointments has been a direct response to patient feedback, the need to improve the patient's overall experience and patient outcomes.

Other initiatives that have been suggested nationally include the move to devolve some diagnoses to surgeries or polyclinics in order to free up capacity. This will enable patients to be seen more quickly in a 'virtual ward' and will have the effect of reducing the need for patients to travel to hospital in certain circumstances. This will lead to reductions in transport emissions and will reduce the carbon footprint of the relevant patient pathway.

Local arrangements

Outlined overleaf is one of the approaches (see case study one) that the Trust will be replicating when revisiting pathways in the future to ensure sustainability is at the forefront of the changes made to patient pathways in the future.

The benefits of sustainability within a non-clinical setting such as waste management and procurement is well understood amongst Trust staff. It will be important for the Trust to fully understand the

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[6] http://www.wwl.nhs.uk/Library/Communications/Darzi/DH_Darzy_Report_Full.pdf

environmental impacts of clinical operations to ensure sustainability is fully embedded into all of the Trust's operations and activities on a day to day basis.

Case studies

The case study below demonstrates how the Trust is working, in partnership with other organisations on a whole health economy basis to improve the quality of care, providing care nearer to home and in doing so, helping to drive the efficiency and sustainability agenda forward.

Case study 1 : Reducing paediatric urgent and emergency admissions to hospital - Fever pathway for children and young people

Following a review into the reasons for the Trust's high paediatric non-emergency admissions, the Paediatric Urgent Care Steering Group has developed a fever pathway involving the whole health economy (e.g. NHS direct, NHS Luton, NHS Bedfordshire, NHS Institution for Innovation and Improvement).

A range of information for health professionals and parents has been produced to identify the right pathways of care to follow for children and young people with fever symptoms.

The aim of developing the fever pathway was to ensure that safe care is delivered to children and young people in the right place, at the right time and by the right person; above all improving patient outcomes. These are all characteristics inherent with a sustainable health service. A number of sustainable benefits have emerged from this new care pathway including a reduction in hospital admissions which will reduce the Trust's overall carbon footprint by savings in transport emissions, energy (such as lighting and heating), clinical and non-clinical supplies and food costs.

A full evaluation to assess the effectiveness of this pathway is planned in the next 12-18 months. This evaluation should also identify and quantify the levels of carbon saved by this new pathway. A selection of the documents produced is set out below.

There are also other key pathways being developed on a health economy basis by the steering group such as gastroenteritis and bronchiolitis.

The case study above is a good example of the Trust working in partnership with other stakeholders within the local economy in a way that will ultimately help reduce the Trust's carbon footprint. It also demonstrates the Trust's ability to become a centre of innovation that markets 'greener' clinical solutions and has a number of characteristics inherent with a sustainable health service.

The Trust is keen to continue to redesign clinical pathways, and where appropriate it will work with the relevant health, local government and private sector organisations as appropriate. As the Trust redesigns its patient pathways, the decision-making process will take account of and consider the sustainability targets that are set out in Section 4. It is also recognised that further work will be needed to ensure that sustainability becomes an integral part of the development of patient pathways in the future in all areas.

This will include quantifying the amount of carbon emissions the new pathways will save and these will be monitored and assessed to see whether all of the possible sustainability costs or benefits have been identified through the SSG ensuring that the lowest possible carbon pathway is developed.

Where patient pathways already exist, the Trust will undertake an exercise to estimate and quantify the annual impacts to enable it to evaluate its performance against the sustainability targets (e.g. travel, water consumption, carbon emissions etc) which it has signed up to.

It is likely that the design of new pathways will have costs associated with achieving the sustainability targets. In order to facilitate this process tailored objectives on how these costs can be monitored and minimised in line with the overall sustainability strategy will be considered and subsequently developed. Staff that participate in the development of new patient pathways will be given guidance on how sustainability impacts can be minimised. In addition, the sharing of good practice examples will be undertaken to ensure ownership of the sustainability agenda continues to grow at every level in the organisation.

Set out below is another good example of where the Trust is finding new and different ways to be more effective and efficient.

Case study 2 : Combining outpatient appointments for the bariatric service
Bariatric services specialises in the prevention and treatment of obesity. The Trust's bariatric service is seen as a designated centre of excellence by the South East Coast Specialist Commissioning Group and is one of only two specialist organisations providing this service to patients in the East of England. The Trust provides services to patients across the region and neighbouring areas including Buckinghamshire, Milton Keynes, Oxfordshire and Northamptonshire.
Over recent months, the patient pathway for the bariatric service has been subject to ongoing review to identify areas of greater efficiency. As part of this efficiency drive, feedback from patient and the expected increases in demand changes have been made to the patient pathway. The bariatric service is highly complex requiring numerous professionals to be included with the patient's care, treatment and ultimately surgery (if the patient meets the assessment criteria). The whole of the patient pathway has been reviewed and as a result a number of the appointments have been combined to take place on the same day rather than on separate days. This will first and foremost respond to patient's feedback and improve the patient's overall experience. Other benefits of this revised pathway will include greater efficiencies from resources together with the sustainable environmental impacts such as a reduction in transport emissions.

Drivers for change

Establishing a more sustainable approach to patient pathways satisfies each of the Trust's three fundamental drivers for change as follows:

- *Identification and realisation of cost efficiencies:* Considering the whole patient pathway across the health economy will identify and realise cost efficiencies. These will include carbon emissions reductions associated with transport, energy, water and the procurement of suppliers. In developing robust delivery plans, the Trust will also be able to quantify the cost efficiencies and sustainable development benefits on an ongoing basis.

- *External regulation and meeting national targets*: Although there are no external regulations that focus on patient pathways, Lord Darzi's recommends the need to redesign patient pathways in the most cost effective and sustainable way.

- *Ethical imperative*: We believe improving patient pathways is the right thing to do. It provides an opportunity to identify ways of provides services closer to home and to those who need it most. We are committed to developing low carbon patient pathways in the partnership with other organisations and stakeholders as required.

6. Procurement

Background

Of the 18 million tonnes of carbon emissions produced by the NHS each year, the NHS CRS has estimated that procured goods and services accounts for approximately 60%. Of this, pharmaceutical products accounted for over a third. Currently, the majority of the Trust's pharmacological procurement is made through NHS Purchasing and Supply Agency (PASA). Based on this information, it is crucial for us to focus on this area to identify carbon reductions.

National perspective

Procurement activity is addressed by NHS Purchasing and Supply Agency (PASA) within its Sustainable Procurement action plan. This plan focuses on embedding Sustainable Procurement (SP) into PASA's operations, in line with the Sustainable Procurement Task Force's (SPTF) Flexible Framework[7]. The Office of Government Commerce (OGC) will operate and develop this action plan as it assumes control of NHS PASA's activities. The Flexible Framework is a self-assessment tool (see Appendix C) and is broken down into the following five areas:

1. People;

2. Policy, Strategy and communications;

3. Procurement process;

4. Engaging suppliers; and

5. Measurement and results.

Within each of the five areas listed above, there are a further five levels that organisations can use to assess how well their supply chain compares to the good practice recommended by the Flexible Framework.

Level 1 - Foundation
Level 2 - Embed
Level 3 – Practice
Level 4 - Enhance
Level 5 – Lead

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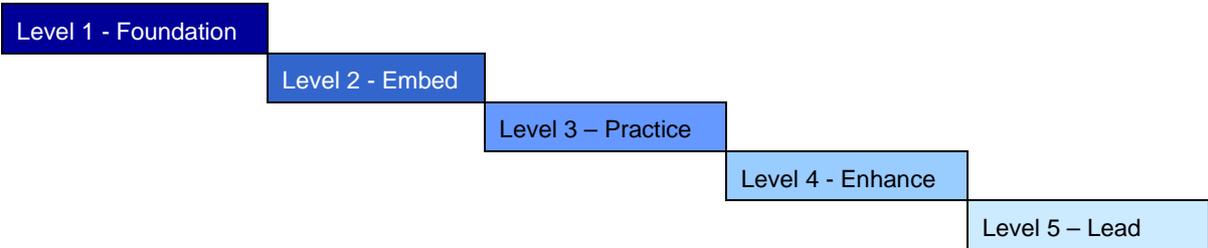
[7] 'Procuring the Future' - The Sustainable Procurement Task Force National Action Plan, Defra, June 2006

Local arrangements

For goods and services not procured through NHS PASA, a significant and growing proportion is now being procured through the Healthcare Procurement Consortium (HPC). This is a shared procurement hub for NHS trusts in the West Midlands, Luton and London areas. The HPC is currently measuring its operations against the Flexible Framework tool and identifying ways of making its existing tendering process 'greener'. The Trust will co-ordinate with the HPC to produce supplier best practise guidance. This will include management information (obtained through supplier contracts) on the freight mileage and mode of transport associated with goods and services being procured.

Consistent with NHS PASA and the HPC, the Trust will self-assess itself against the Flexible Framework tool and in doing so will sign up to achieving (as a minimum) Level 1 – Foundation stage by September 2010. In addition, the Trust will benchmark its progress against best practice and develop actions for improvement. The results from the Flexible Framework self assessment tool will be reported to the SSG via the Procurement Sustainable Lead.

The Flexible Framework will be in operation at NHS PASA, the HPC and the Trust, ensuring the entire procurement spend of the Trust is covered by considerations of sustainable procurement. This will lead to prioritised supplier engagement across the whole of the Trust's procured goods and services. It will also facilitate in the revision of the Trust's Procurement Policy which will be in line with the expectations of the Flexible Framework.

Training

NHS PASA has developed a sustainable procurement training programme to research the dimensions of sustainable procurement and how to implement this in practice. Set out in Appendix F is the full details of this training. The Trust will consider selecting staff from the Procurement Division to attend the NHS PASA sustainable procurement training programme in order to embed sustainable procurement across the Trust.

Drivers for change

Establishing a more sustainable approach to procurement satisfies each of the Trust's three fundamental drivers for change as follows:

- ***Identification and realisation of cost efficiencies:*** Many organisations make procurement decisions based largely on up-front costs. Considering the resources being used and the related costs over the life of goods or services can produce better, more cost-effective decisions. This is a key outcome of sustainable procurement and will ensure cost efficiencies are obtained from the Trust's procurement operations.

- ***External regulation and meeting national targets***: The Government's Sustainable Procurement action plan sets out demanding expectations for Government Departments, and over the coming years these are likely to apply to Local Authorities, NHS Trusts and other local bodies. In addition, sustainable procurement will lead to goods and services with lower sustainability impacts, aiding the Trust's efforts to meet national targets in areas such as energy, water and waste.

- ***Ethical imperative***: Procured goods and services make up the highest proportion of the NHS carbon emissions and as such represent a critical part of the Trust's effort to mitigate climate change by focusing on this area as a priority. Green procurement practices will allow the Trust an opportunity to lead other organisations towards a low carbon economy.

7. Energy

Background

Energy consumption within all NHS trusts is high due to the need for heating, cooling, lighting, IT equipment and the high use of electronic equipment. Carbon emissions produced from energy consumption accounts for 22%[8] of the total NHS carbon footprint.

National perceptive

In recent years, there have been a number of incentives to save energy within the NHS together with associated government funding being made available. A new energy efficiency scheme will commence from April 2010. The Government will introduce a mandatory cap and trading scheme for carbon emissions called the CRC EES. The scheme targets large organisations in both the public and private sectors (who do not already participate in the EU Emissions Trading Scheme). In essence, it will assign a price to carbon emissions produced through the use of energy.

Under the CRC EES, trusts will be required to purchase carbon credits based on its carbon emissions. Until 2013, this initial price per tonne will be £12. This will be followed by a price produced through an open auction and organisations will need to trade in carbon credits during the year according to need.

Whilst the scheme is designed to be revenue neutral, there is a significant cashflow impact, and organisations that reduce their carbon emissions will receive a benefit and organisations that fail to reduce carbon emissions will be penalised. There is no financial limit for the benefits and penalties that will be given and this may be substantial.

Benefits and penalties will be calculated using a league table, which will rank participants according to their success at reducing carbon emissions from energy usage. The league table (which will include all private and public sectors organisations who are involved in the scheme) will be publically available providing a significant reputational risk to participants.

In addition, many public sector organisations have already evaluated and piloted innovative ways to save energy. One example includes using software designed to monitor and reduce energy consumption to personal computers (PCs). In particular, this software automatically shut down non-essential PCs out of hours such as administrative IT at nights and/or at weekends).

Local arrangements

The Trust qualifies for the CRC EES from April 2010 and it will, therefore, begin to accurately measure and record its energy consumption and account for its carbon emissions in preparation for the CRC trading phase to control any associated financial or reputation risks that we may be exposed to.

In 2008/09, the expenditure on energy (gas and electricity) was over £1.9m, this is just below the average

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[8] NHS England Carbon Emissions; Carbon footprint study, 2008. London: SDU, SDC and Stockholm Environment Institute

when compared to other comparable trusts (see Figure 2 overleaf). This data has been submitted as part of the Estates Return Information Collection (ERIC) on an annual basis.

Figure 2 : Total energy costs for 2008/09

Total energy costs - 2008/09

All medium acute trusts ▬▬ Average
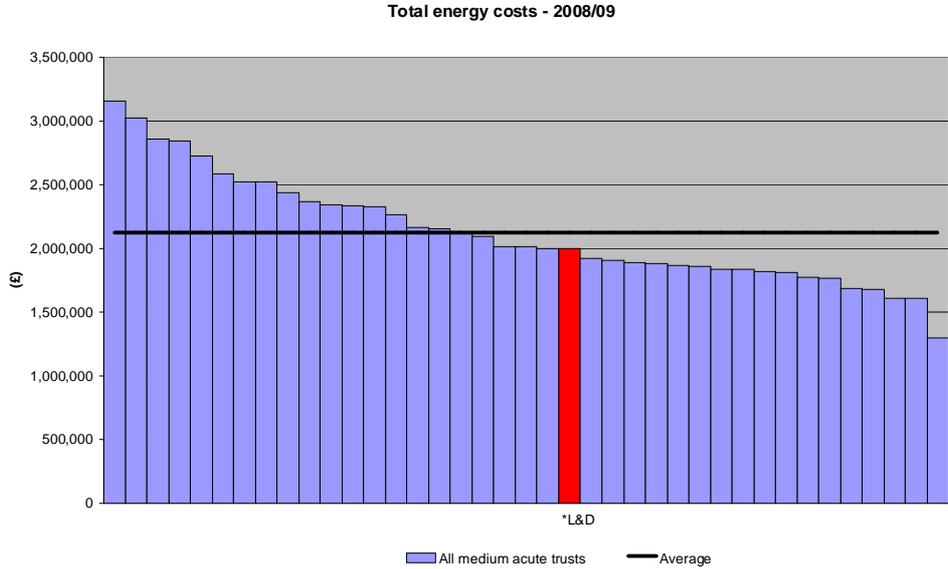
* Source: ERIC data returns 2008/09

The graph set out below (see Figure 3), shows the level of carbon emissions reported by the Trust over the past nine financial years. Since 2000/01, the Trust has seen a 24% increase in the level of carbon emissions from the energy that it uses. Based on the Trust's 2006/07 baseline figures set out below, the Trust produced 9,000 tonnes of carbon. The Trust will be required to reduce this to 8,100 (10%) by 2015. The real challenge will be stopping any further growth in carbon emissions. The Trust is signed up to delivering a 3% reduction in its carbon emissions each year. This will be achieved through a reduction in utility consumption (e.g. gas and electricity) by the same amount.

Figure 3 : The Trust's carbon emissions arising from energy usage

LUTON AND DUNSTABLE HOSPITAL NHS FOUNDATION TRUST
CO_2 Emission from energy use (Tonnes)
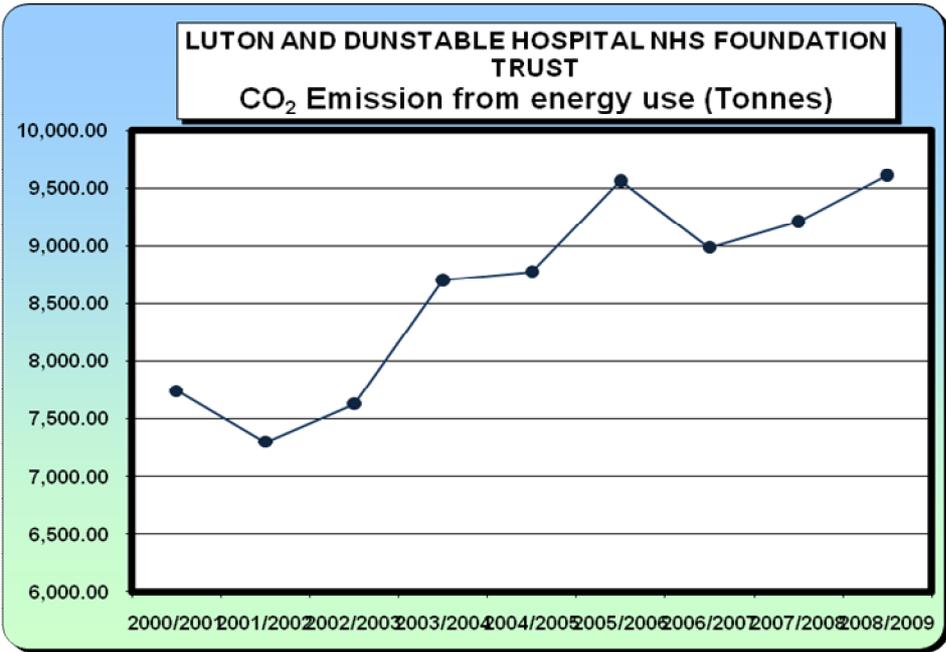
Assessment of energy performance

In order for the Trust to gain a greater insight into the procurement and management of its energy usage, the Trust will make use of the 'Enco2de', a tool developed collaboratively by the Carbon Trust, the Building Research Establishment (BRE), NHS Estates, and other NHS organisations outside of England[9]. The opportunities for energy saving will include the following areas:

- Heating and hot water;
- Ventilation and air conditioning;
- Lighting;
- Office and small power equipment, including information technology (IT);
- Catering;
- Specialist equipment;
- Building fabric;
- Combined heat and power (CHP); and
- Good housekeeping and energy management.

The Sustainability Champion in conjunction with the Energy Sustainability Lead will develop a robust delivery plan using the areas outlined above.

Additional funding for energy efficiency initiatives may be available to the Trust from a number of sources e.g. Government sponsored schemes and the European Union. Further information is included in section 14.

Reduction in energy through the better use of Information Technoolgy (IT)

The use of IT is a significant contributor to the increase in energy usage across the NHS over the past ten years. However, future developments offer the potential benefits both in terms of reducing energy usage required by IT and to use IT to reduce energy usage elsewhere. In line with the Trust's five year IT strategy, progress has already been taken to develop a server virtualisation. It is anticipated that this development will reduce the Trust's servers by over 80%, which will bring significant reductions in energy usage.

Within the Trust, remote working is already used successfully in radiology, where Consultants can view scans and x-ray images remotely. This prevents unnecessary travel and reduces the demands on office space at the hospital site. Elsewhere, the Occupational Health team, now organises its rosters to enable staff to take one day off each fortnight, previously staff took a half day off each week. This new arrangement negates the need for two separate journeys into the hospital site and will save on transport carbon emissions. In addition, working at home when reports or policies need to be produced is supported by management and is another example of working patterns being adapted to reduce the need to travel.

Drivers for change

Controlling the use of energy will impact upon all three of the Trust's fundamental drivers for change as detailed below:

- ***Identification and realisation of cost efficiencies:*** Carbon emissions generated from energy is the second largest contributor to the NHS carbon footprint. This is an area for a number of quick wins and cost efficiencies. These efficiencies will be achieved through turning off lights, turning down radiators, using energy saving devices, using IT software to shut down unattended computers and replacing inefficient plant and equipment. Further opportunities will be explored to use solar panels to collect some of the Trust's energy for its own use.

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[9] Health Technical Memorandum 07-02: EnCO2de – making energy work in healthcare, Carbon Trust and the Department of Health - February 2006.

- ***External regulation and meeting national targets***: The new CRC EES detailed above will bring a regulatory requirement to report energy usage on a regular basis (see Section 14 further information). It is expected that this will increase the costs of using energy and may expose the Trust to a number of reputational and financial risks. Also see Section 14 for further specific reporting requirements for energy.

- ***Ethical imperative***: As energy is the second highest contributor to the NHS carbon footprint, this will be a vital component in the Trust's duty to combat climate change.

8. Water

Background

In 2007/08, the NHS in England consumed an estimated 38.8 million cubic metres of water and generated approximately 26.3 million cubic metres of sewage at an approximate cost of £145 million[10]. In addition, it has been estimated that over 10% of all water is lost through leakages once it has left the water suppliers infrastructure.

Local arrangements

In 2009/10, it is estimated that the Trust's consumption will be 110,000 cubic metres of water and roughly the same amount of sewage. The combined cost of water and sewage is estimated at approximately £140,000 per annum[11]. For 2008/09, the cost per m^3 equates to 63 pence, which is one of the lowest costs compared to other comparable trusts (see Figure 4 below).

Figure 4 - Water cost per m^3 – 2008/09

Water costs per m^3 - 2008/09
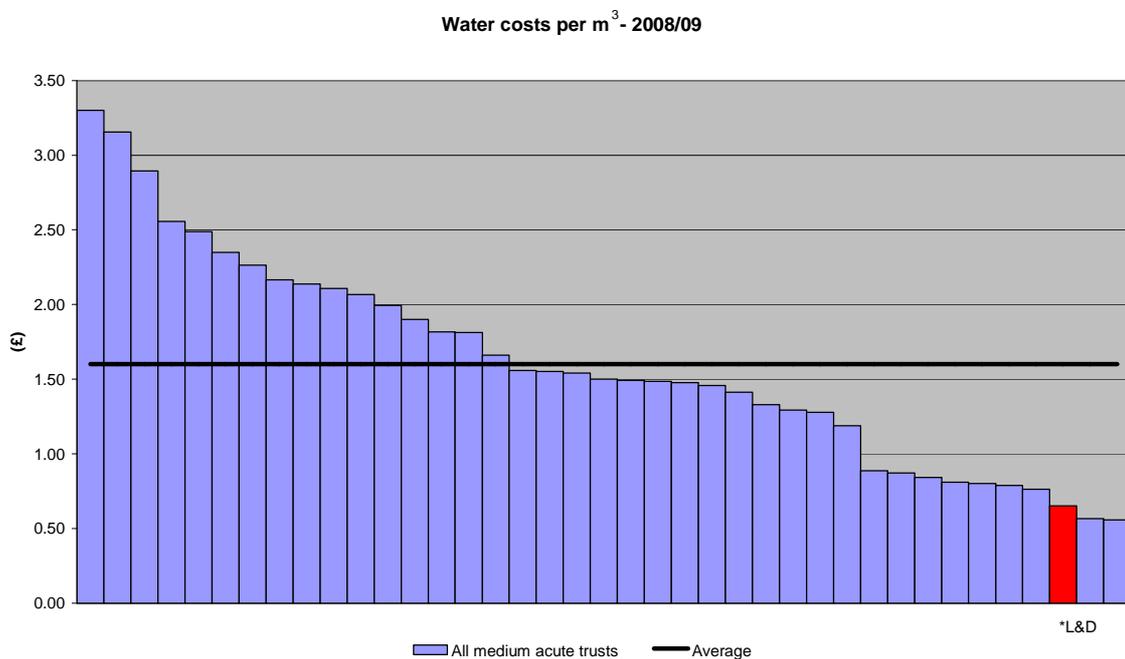
* Source: ERIC data returns 2008/09

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[10] Health Technical Memorandum 07-04; Water management and water efficiency, 2008; (HTM) Department of Health: London: HMSO

[11] Luton and Dunstable NHS Foundation Trust Water and Electricity Report, McKinnon and Clarke, November 2009

The Sustainability Champion in conjunction with the Water Sustainability Lead will develop a water efficiency delivery plan. The delivery plan will consider localised water metering to facilitate the immediate detecting and fixing of leaks in the Trust's infrastructure.

The Trust will cease to procure bottled water in order to reduce water consumption due to the comparatively large amount of embodied water used to produce a single bottle of water. In addition, the energy used in producing and the fuel used in transporting bottled water also produces carbon emissions. Stopping the supply of bottled water also demonstrates the overlap between energy consumption, procurement, water consumption and cost. Identifying such issues, will allow the Trust to achieve synergistic reductions in each of these areas.

Drivers for change

Water conservation is often overlooked in the drive for greater energy efficiency. However, the following analysis against the Trust's fundamental drivers for change demonstrates it is important to control water consumption.

- *Cost efficiencies***:** It is likely that water prices will increase in the future as the Government water strategy calls for prices to take "into account the full social cost of carbon" arising from water use[12]. There are a number of 'quick wins' to conserve water by stopping the purchase of bottled water, placing a 'hippo' (a plastic bag designed and supplied by the water companies) in each toilet cistern, which will minimise the number of litres of water used each time it is flushed or identify the opportunities to harvest rainwater from roofs to then recycle it within the Trust. In addition, further efficiencies will be made through the ongoing education and raising awareness to staff, patients and visitors the importance of using this finite resource as carefully as possible.

- *External regulation and meeting national targets***:** Water shortages in the South of England are increasingly common and the disposal of sewage can lead to local environmental and planning disputes. Water management is seeing an ever-increasing level of regulations being developed to manage the associated risks. By actively managing water usage and sewage production, the Trust will be well placed to react to future regulatory developments. Also see Section 14 for further specific reporting requirements for water.

- *Ethical imperative***:** As one of the most significant users of water in the Luton area, the Trust has a duty to lead by example through water conservation. In addition, the collection, treatment, distribution, heating and disposal of water is highly energy intensive. The use of water by the Trust, therefore, represents a significant indirect impact on carbon emissions.

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[12] http://www.official-documents.gov.uk/document/cm73/7319/7319.pdf

9. Waste

Background

In 2007/08, the NHS spent £71.2m on waste disposal costs. The SDC has estimated that if the NHS achieved a recycling target of between 40% and 60%, this would translate into a saving of up to 23,000 tonnes of carbon dioxide each year.

The globally accepted Waste Management Hierarchy is the basis for Government and NHS waste management and minimisation policy. It has the following five stages:

- Waste Prevention;
- Re-use;
- Recycle or Compost;
- Energy Recovery; and
- Disposal.

Local arrangements

According to the NHS Estates data, the Trust spent £353,000 on waste disposal costs in 2008/09. This is represents an increase of £80,000 from the previous year. The Trust's waste costs compared to other comparable trusts is just above the average (see Figure 5 below). The Trust currently employs a Waste Manager to oversee waste management and minimisation.

Figure 5 - Total waste costs for 2008/09

Total waste costs - 2008/09
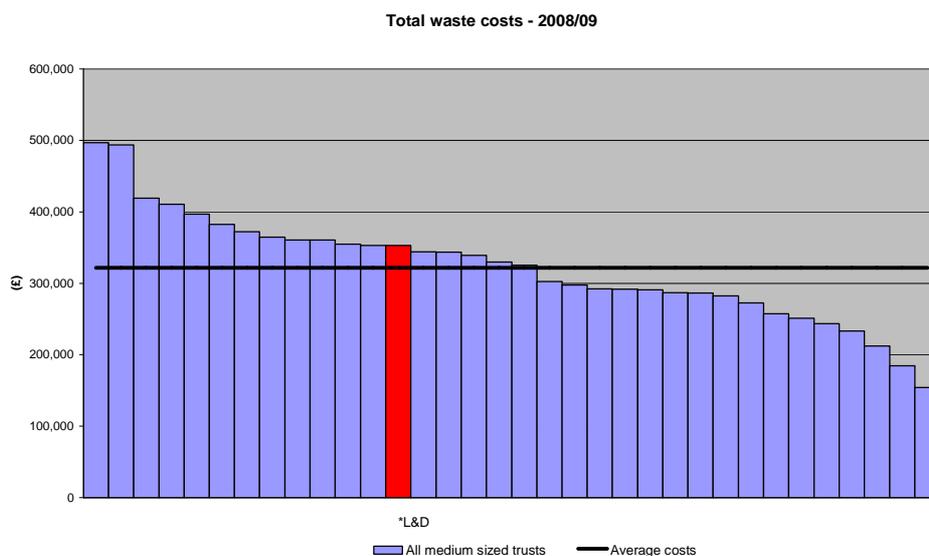
The issue of waste is closely linked to that of procurement, addressed in section 6. Decisions over whether to procure single use or reusable clinical devices, the amount of food waste arising from catering and the amount of packaging for procured goods are all impacted by procurement decisions. It is, therefore, necessary for the Waste Manager and Sustainability Champion to work closely with the procurement department to achieve waste minimisation. This will be achieved through the development of a robust waste management delivery plan. The Waste Manager Lead will sit on the SSG and be responsible for reporting progress against the waste management delivery plan.

The Trust has developed and will shortly introduce separated bins in ward and clinical areas for recyclable and non-recyclable domestic waste. Domestic waste is currently separated by the waste provider, which compared to on-site separation reduces recycling levels due to the cross-contamination and is less cost effective. The Trust is also introducing starch bags into the kitchens to collect food waste for compost.

Waste minimisation and management presents a real opportunity for the Trust to work with other organisations. The Trust is a member of the Bedfordshire Total Waste Management Consortium, which consists of Bedford Hospitals and NHS Luton. Members of this group meet monthly to discuss the operation of a joint waste management contract with Polkacrest Ltd, which covers the management of clinical, domestic, electric and all other forms of waste produced by the Trust. The Trust is represented at these meetings by the Waste Manager.

Disposing of clinical waste is over four and half times more expensive than domestic waste (approximately £370 per tonne against £80 per tonne for domestic waste). It has also been highlighted that Trust staff have observed numerous incidents of staff inappropriately disposing of domestic waste into clinical waste bins. The Trust will explore the opportunities to convert clinical waste into building material in line with the case study set out in Appendix B.

Drivers for change

Along with energy management and water, waste management has a bearing on each of the Trust's three fundamental drivers from change as follows:

- *Cost efficiencies*: As outlined above, waste is a significant and growing cost for the Trust. This cost can be reduced through increasing the levels of recycling and through the better separation of clinical and non-clinical waste.

- *External regulation and meeting national targets*: One in every 100 tonnes of domestic waste (which excludes clinical waste) produced in the UK comes from the NHS, with most going directly to landfill. The Government is increasingly concerned with the adverse effects of sending waste to landfill. In the last ten years, the Government has introduced and increased the Landfill Tax. In 2007, the Waste Electrical and Electronic Equipment (WEEE) directive came into force regulating the disposal of electronic equipment. In addition, the Trust is also subject to strict regulatory requirements governing its disposal of clinical waste. Also see Section 14 for specific reporting requirements for waste production and disposal.

- *Ethical imperative*: In addition to the adverse effects on the local countryside of sending waste to landfill, waste production also has an adverse, indirect effect on climate change. A study by the NHS Confederation and New Economics Foundation found that if the NHS in England and Wales recycled all of its paper, cardboard, magazine and newspapers, there could be a savings of 42,000 tonnes of carbon each year. Although there is no regulation governing the reduction or reporting of the indirect emissions attributable to waste, their reduction would be in line with the Trust's ethical duty to mitigate climate change.

10. Travel and transport

Background

Accessibility is a key issue for patients and staff. Creating good accessibility to the hospital site and developing a range of alternative transport options is crucial if the Trust is to continue to expand and deliver its services to patients in a sustainable and cost effective way. The Trust must meet these needs in a way that is maintainable into the long term and this should underpin any investment decisions around patient access.

Evidence shows that moving away from inactive travel (reliance on cars, motorbikes etc) and moving towards active travel, such as walking, cycling and public transport will contribute to improving the well-being of staff, patients and visitors alike. This could have a significant impact on reducing the future demands on the Trust's car parking facilities as well as reducing carbon emissions[13].

Local arrangements

Luton and its surrounding areas experiences high volumes of traffic, particularly but not exclusively during the morning and afternoon 'rush hours'. This slows down the access to the hospital for both patients and staff and could impact upon appointments being missed or significantly delayed.   There are already a number of initiatives supported by the Trust to encourage staff to cycle to work. A recent campaign has included the reward of a free breakfast for those staff who cycled into work.

> **Encouraging the use of different modes of transports** - At present, the Trust has limited car parking facilities and discussions are currently ongoing to consider alternative options. Consideration will be given to increase the car parking charges made to staff, patients and visitors to encourage more people the use alternative modes of transport. Staff who work within three miles of the hospital site will be targeted to use different forms of transport or be part of a car sharing scheme. In order to facilitate this, the Trust will develop a comprehensive Travel Plan. Consideration will also be given review the current expenses policy, in particular, with regards to the business mileage rates paid to car drivers to look at ways of discouraging this use and encourage more to use other sustainable forms of transport by introducing a standard mileage rate for those who use public transport etc. In all cases scrutiny should be given to reducing business mileage through other forms of sustainable methods, such as conference calls, video conferencing, computer based training etc.

> **Luton and Dunstable Busway** - One solution to the Trust's car parking facilities and access issues is the tracked Busway which is being planned for the Luton and Dunstable area to reduce traffic congestion (see figure 6 overleaf). It is proposed to have a stop at Toland Close, approximately half a kilometre from the Trust's main entrance.   Engagement with Arriva and Council staff (at a senior level) responsible for the development of the Luton and Dunstable Busway is needed as a matter of urgency to ensure that the Trust maximises its benefits to both patients and staff. A decision to move the proposed Busway stop to outside the Trust's main

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[13] PH13 Promoting Physical Activity and the Workplace, 2008. Public Health Programme Guidance, NICE [Online].

entrance would bring a number of additional benefits.

Figure 6 : Luton and Dunstable proposed Busway
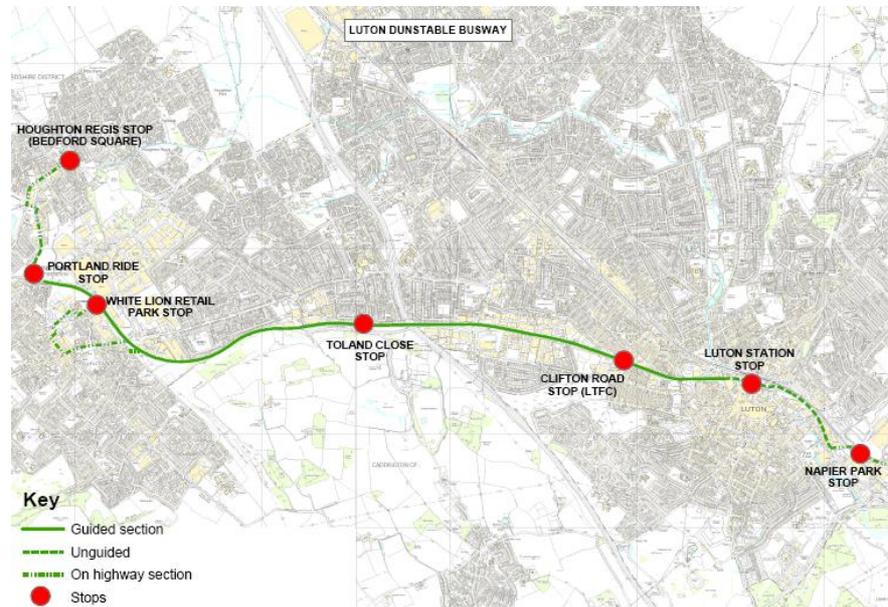
Non-emergency patient transport contracts

For new non-emergency patient transport contracts, the Trust will consider the inclusion of the supplier to provide evidence that it is planning journeys in the most cost effective and sustainable way. In addition, the Trust will stipulate a 'brake' clause to enable any changes in patient pathways that reduce non-emergency transport journeys to fully achieve the efficiency savings that may be identified.

Drivers for change

The relevance of travel and transport on the Trust's fundamental drivers for change can be summarised as follows:

- **Cost efficiencies:** The need to provide car parking for patients, staff and visitors limits the prospect of future expansion and may impact on possible income generation of the Trust's operational site. Parking costs and the time spent travelling to the hospital site also presents a cost to staff and patients, which could lower the appeal in an increasingly competitive health market. There are also cost efficiencies associated in a reduction in the standard car mileage rate which will be reviewed shortly.

- **External regulation and meeting national targets:** Charging for parking is controversial - Wales and Scotland have already abolished charges in 2008. With the recent political announcements in England, there is a possibility that car parking charges will be abolished for some patients (e.g. patients who are regularly receiving cancer treatments or relatives visiting patients in intensive care). The Trust must develop a comprehensive Travel Plan that is not solely dependent on a cost disincentive to parking. Also see Section 14 for specific reporting requirements on travel and transport.

- **Ethical imperative:** 5% of all travel in England is associated with the NHS. Travel is responsible for around 26% of the UK's carbon emissions. Reducing travel to hospital presents a substantial opportunity for the Trust to contribute to a reduction in its carbon emissions.

11. Estate management

Background

The role of Estates Management is crucial to the successful implementation of the Trust's SDMP given its role in managing energy, water and waste sustainably. This section of the SDMP focuses on two key areas:

1. Managing the existing buildings; and

2. The designing of new ones.

Managing the existing and future estate is critical to achieving targets and actions stated in the above sections dealing with energy, water and waste. The Head of Estates will be expected to form part of the SSG.

Managing the existing Estate

The Trust's hospital site is made up of buildings that have been added periodically as it has developed and grown to meet the demands of the local population. This has produced a diverse profile that presents a real challenge in managing the Estate in a sustainable way.

The Trust's overall SDMP will be supported by establishing an Environmental Management System (EMS) for use by the Estates Department. The main benefit in setting up a coherent EMS is to ensure that actions are strategically aligned with all of the Trust's sustainability objectives.

Setting up an EMS will also assist the Estates in setting boundaries for what it takes responsibility for monitoring and acting on (for example energy consumption of buildings, which would be covered in both this SDMP and an EMS) and what is outside of its scope and only covered by the SDMP (for example carbon emissions from travel).

The Trust will aim to establish an EMS that is compliant with the international standard ISO 14001 or the EU Management and Audit Scheme (EMAS). In doing so, the Trust will also consider the financial implications or the investment needed for such a system and make an informed decision on whether the initial costs outweigh the benefits in working in a more sustainable way.

As part of EMS accreditation, the Trust will analyse the resource used at each building within its estate covering energy and water consumption. This will ensure EMS compliance and identify the actions to deliver efficiencies that can populate the various sustainability delivery plans.

There is a wide range of Building Research Establishment Environmental Assessment Methods (BREEAM) and tools designed to help construction professionals understand and mitigate the environmental impacts of the developments they design and build[14]. The BREEAM Healthcare XB

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[14] http://www.breeam.org/page.jsp?id=66

programme[15] is a methodology specifically designed for healthcare organisations and was commissioned by Department of Health to replace the NEAT (the NHS Environmental Assessment Tool).

The Trust will consider subscribing to the BREEAM Healthcare XB programme. In doing so, it will compare itself against the self assessment tool issued by BRE to assess its existing buildings. This could lead to BREEAM certification for the entire Trust estate, which would provide external assurance to inform compliance with any future building regulations. These actions will enable the Trust to establish localised base lines across the estate, and to prioritise inefficient areas of the estate for further action.

Once profiling has been completed, the Trust's Sustainability Champion will work with Estates staff to monitor the resources used through existing building management systems and reporting arrangements established in the above sections.

Designing new building and refurbishment

The NHS CRS sets the target that all new NHS healthcare buildings should aim to be low carbon by 2015. In order to do this, the NHS CRS recommends that all new healthcare builds will be designed and built with reference to the information published by the UK Climates Impact Programme (UKCIP2009) and should also give consideration to the following levels in the design stages:

- Site selection: transport and integration with other services;

- Orientation: to maximise daylight, shade, and ventilation naturally;

- Thermal issues: shape, density, materials and systems for winter heating and summer cooling; and

- Use of renewable forms of energy.

BREEAM Healthcare will be used by the Trust to provide guidance on buildings at every stage of their lifecycle, including

- New builds;

- Major refurbishments;

- Extensions; and

- Existing buildings in operation.

All new buildings commissioned by the Trust will be BREEAM rated 'Excellent" from this point onwards. The Trust will also stipulate this as a contractual requirement in all future building and refurbishment contracts and use BREEAM certified contractors where appropriate.

All new builds and refurbishments will also consider how future demands are likely to change as a result of climate change, for example resistance to flooding and the ability to cope with the anticipated increase in the frequency and severity of extreme temperatures.

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[15] http://www.breeam.org/page.jsp?id=114

12. People and communication

Background

For this SDMP to be effective staff, patients, visitors and other external stakeholders will need to be aware of its purpose, approach and their associated responsibilities to help the Trust deliver upon its key targets and satisfy the drivers for change (detailed in the proceeding sections). This section describes the need for a robust communication strategy that focuses on the internal and external audience.

Communication strategy

An essential way in which staff, patients, visitors and other external stakeholders will be engaged with the sustainable development agenda will be achieved through a comprehensive communication strategy designed to share the contents of this plan to a wider audience. This strategy will be delivered through the existing events and publications and through the group of interested Sustainability Leads (who will be nominated in the coming months).

The final SDMP will be made available, in full, to interested staff, patients, visitors and other external stakeholders. However, the majority of people will only be interested in the high level messages and actions that they can actively contribute to.

The Trust's sustainable development Communication Strategy will identify and modulate the areas that should be communicated beyond those interested in the detailed of the SDMP. These should be separated into messages aimed at different audiences such as internally for Trust staff and externally which could be patient focused. Once the key messages and the target audience are identified, the strategy should designate the nature and timing of internal and external methods to communicate them. This should draw on the resources and experience of the Trust's existing central Communication Team.

The key messages and lessons learnt should be incorporated into a standardised campaign and under a standardised brand, which should be disseminated to all of the Trust's members. For example internally through the intranet, email campaigns, incentive schemes, included within the corporate welcome, training material, the internal newsletter, as well as externally through advertising campaigns, the website and the newsletters produced for patients, GPs and stakeholders. Branding and external messages should be done in consultation with Governors and local partners (see external communication below).

Internal communication and staff participation

The Trust has approximately 3,000 staff who will play an important role in the implementation of many aspects of this SDMP, through activities such as energy conservation, waste minimisation or the redesign of patient pathways. It will be a significant challenge to inform them of their sustainability responsibilities and to maintain interest over the longer term.

An important aspect of the internal plans will be to capture examples of good practice that the Trust has fostered and will foster in the future. These should be used as part of internal communication to demonstrate how staff behaviours and operations can be adapted to become more sustainable and efficient.

Job descriptions and the annual appraisal process will be used to inform staff of their responsibilities pertaining to the achievement of the national carbon emissions targets. A mechanism will also be developed and put in place that recognises and rewards those for good performance. We have set out in Appendix E, generic competencies for the Trust Board, the Sustainability Champion, the Sustainability Leads and all other staff.

External communication and partnership working

Patient and member Governors will be consulted with to discuss the most appropriate means of communicating specific messages to the membership and more widely. This will be facilitated through the Governor Sustainability Lead.

Partnership working is described in the next section and is equally important for inclusion in the communication strategy. The Trust's interaction with local partners presents an opportunity not only to share and learn best practice, but also to build an even stronger sustainability brand and awareness amongst local people. As local councils and PCTs address sustainability communication, they will be targeting the same audience as the Trust's external efforts, so it is important that strategies are aligned.

Relevant elements of the draft Communication Strategy for this SDMP will be shared with local councils, NHS Luton and NHS Bedfordshire with the aim of ensuring outreach to patients is done consistently with the efforts of partner organisations. Where possible, opportunities for joint events or publications should be planned.

13. Partnership working

Background

Partnership working is essential if the Trust is to reduce the impacts of climate change and develop sustainable low carbon solutions. Partnership working runs through a number of the previous sections and will help respond to the drivers for change in the areas of energy management, waste, transport and travel, procurement, communication and patient pathways.

Local arrangements

The Trust is a member of the Luton Forum, which is Luton's Local Strategic Partnership (LSP). The Trust has a key role to play in delivering Luton's Local Area Agreement (LAA), which incorporates Government's Communities and Local Government (CLG) National Indicators (NIs) as follows:

- 186 - Per Capita reduction in CO_2 emissions in the Local Authority Area; and

- 188 - Planning to adapt to Climate Change.

The Trust will also continue to take an active role in shaping the sustainability agenda with its LSP in Luton.

Sustainable development presents a good opportunity to strengthen the Trust's partnership working arrangements. This is reflected in the way in which its LSP partners will be assessed through the Audit Commission's Comprehensive Area Assessment (CAA), which explicitly examines their success in delivering community driven outcomes relating to the use of natural resources through Key Lines of Enquiry (KLOE) 3.1 in the Use of Resources. The Trust will lead by example and share its experiences of this SDMP to assist the Luton Forum in meeting the CLG NIs.

It is also recognised the need to work more closely with other external organisations in the Luton and Dunstable area, such as Luton Borough Council, Central Bedfordshire Council and NHS Luton, to strengthen our partnership arrangements. In particular, with regards to the benefits of the new proposed Busway for the Luton and Dunstable area. In addition, the Trust will build upon the relationships it has made as part of the development of the children and young people fever patient pathway and replicate this in the future.

The waste consortium

As set out in Section 9, the Trust is a member of the Bedfordshire Total Waste Management Consortium. This consortium involves Bedford Hospitals and NHS Luton. This group meets on a monthly basis to discuss issues and performance with the supplier Polkacrest Ltd.

The NHS SDU local sustainability network

The Trust's Estate Manager and the Non-Executive Director Sustainability Lead now regularly attend the regional network of events delivered by the NHS SDU, based in Cambridge. These events provide an opportunity for participants to share sustainable development initiatives, identify areas for partnership working and an opportunity to solve common issues.

Drivers for change

Partnership working is an important part of the Trust's fundamental drivers for change and these can be summarised as follows:

- *Cost efficiencies*: Working in partnership will identify cost efficiencies that will benefit the whole economy as well as the Trust.

- *External regulation and meeting national targets*: There are two national indicators (188 and 186) that the Trust will sign up to and assist with its achievement.

- *Ethical imperative*: We recognise the importance of working in partnership and believe it is ethically the right thing to do.

14. Finance and reporting

Background

It has been estimated that for every 1% reduction in energy consumption made by the NHS, it could save in the region of £4 million every year[16]. The Trust will adopt integrated financial appraisal into all of its decisions to ensure that sustainability becomes embedded into all of its operations.

Local arrangements

With the impending CRC EES (see Section 7), it will be important for the Trust's Finance Department to be increasingly 'carbon literate' and a nominated representative has already been identified. It is estimated that the CRC EES could lead to a negative cash flow effect for the Trust of £135k per annum in April 2011 and 2012. If the Trust does not perform well in relation to other participants in the scheme (which includes both public and private sector organisations), this could lead to a number of significant risks, including:

- A significant net expenditure of hundreds of thousands of pounds over the first few years of the scheme;

- Adverse reputational damage; and

- The expectation of an increase in the cost of the scheme when the auction phase for carbon credits begins in 2013.

In readiness for the CRC EES, the Trust has already developed an implementation plan, which identifies the actions associated with this new scheme. In order to make informed decisions about the scheme, a report covering the costs and benefits of the CRC EES in the prior year and the proposed carbon spend for the upcoming year will be produced each February. The proposed spend will be supported by data setting out the prior year's relevant carbon emissions and the expected growth or reduction in these emissions based on the Trust's delivery plans for the following year. This will be the be reported through to both the SSG and the Trust Board.

Future business cases

All future business cases for capital and substantial non-capital expenditure will incorporate long term analysis of the costs to the Trust, both in terms of its use of finances and natural assets. Set out in Appendix D is a tool, which will be used by Trust staff to enable them to subject outline business cases to rigour and challenge having sustainability at the centre of these decisions. This tool builds sustainability into the existing OGC five case model as follows:

- **Strategic fit** - identifies whether the project is in line with the principles of this SDMP;

- **Evidence** - establishes whether all of the appropriate information and impacts been fully

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[16] Based on 2008 prices.

        identified and consulted on.

- **Impacts and actions** - assesses whether the project has been subject to a robust cost benefit analysis;

- **Options** – establishes whether a full range of options have been considered in managing and mitigating conflicts within the proposal or project in an integrated way; and

- **Monitoring and evaluation** - consideration of how data on environmental impacts will be collected, interpreted, acted upon and used to inform future projects.

To assist in the evaluation of a financial case, in addition to payback period and return on investment, a new metric of capital cost per tonne of carbon saved over the lifetime of a capital project ($£/tCO_2LT$) will be used. This will allow the Trust to compare projects and business cases on the basis of financial efficiencies by reducing carbon. This will also help to meet the carbon management targets and prioritise investments based on those projects which are the most cost and carbon efficient.

As the Finance Team becomes more carbon literate, the Trust will move towards the inclusion of a shadow price of carbon into all project costs and new business cases.

The SSG will disseminate guidance to staff on how to use this tool to appraise both the long term financial and environmental impacts of capital projects. The Trust's Sustainability Champion will support staff on the detailed use of this tool.

Funding opportunities

Whilst the anticipated squeeze in NHS funding will increase the financial pressures on the Trust, there are a number of opportunities to receive additional funding for energy efficiency capital projects. For example, Salix Finance is an independent company funded by the Carbon Trust. Salix offers to match the financial commitment made to eligible capital projects to improve energy efficiency[17]. The Trust will also seek to identify other funding opportunities such as European Union grants which can be made available through the local NHS SDU.

Monitoring, reporting and obtaining assurances

HM Treasury and Monitor are currently refining their sustainability reporting requirements. It is planned that sustainability financial and non-financial figures will be included within the Trust's Annual Report. It will be a mandatory requirement to publish figures on:

- Carbon emissions;

- The use of finite resources (consumption of water and energy);

- The production and disposal of waste; and

- Carbon emissions from vehicles owned by the Trust and carbon emissions from official business travel using other forms of transport[18].

. From 2010/11, the Trust will report carbon emissions, divided into emissions arising on site (such as through boilers), emissions from supplied electricity and emissions through business travel. In addition, it is likely that the sustainability figures reported in the Trust's annual report will be subject to the same external assurances as all of the other Trust's financial data.

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[17] http://www.salixfinance.co.uk/nhsprogramme.html

[18] The Trust's expenses system will be updated to collect mileage from both forms of travel. It will be the SDM who will be responsible for convert this into carbon emissions using Defra's standard conversion rates.

The Sustainability Champion will have overall responsibility, together with finance staff, to collect, monitor and report sustainability data to the SSG and Trust Board. In line with the requirements for the development of detailed delivery plans (see Section 4), reporting the ongoing progress will be set against key trends required to meet the Trust's targets. It will be expected that these delivery plans will be amended where actual trends are not in line with target trends.

Appendix A – High impact actions

Set out below is a summary of our high impact actions that we consider are crucial for moving forward our sustainability agenda.   The Sustainability Steering Group will be responsible for considering and costing all of these high impact actions. Where high impact actions require further investment these will be subject to individual business cases and where applicable approved given.

1. **Lighting schemes**
   a. Pilot project lighting scheme.
   b. Fit light timers, so that lights will automatically turn off when not in use.

2. **Energy/heating controls**
   a. Reduce / adjust the temperature settings (for heating and cooling the buildings).
   b. Explore the opportunities for server virtualisation.
   c. Consider the appropriate use of air conditioner units.

3. **Water consumption**
   a. Fit water controls to all toilet cisterns.

4. **Staff training and education to promote 'good housekeeping' such as:**
   a. Turning off electrical equipment (laptops, computers, printers etc).
   b. Reducing the amount of printing (default computers to print double sided).
   c. Turning off taps and inform Estates if leaks occur.
   d. Encouraging staff to use the stairs instead of the lifts.
   e. Educating staff on how to help building heating and cooling to work at its ultimate efficiency e.g. keeping windows closed.
   f. Encouraging greater use of telephone/video conferencing.
   g. Generating ideas which clear articulates what could be saved by turning off lights e.g. twelve lights left on for an hour could power an ultrasound machine for 60 minutes.
   h. Drawing comparisons between home and the workplace.

In addition to the 'quick wins' set out above, the Trust will also invite the Carbon Trust to perform another energy efficiency survey to identify other 'high impact' initiatives.

Set out below are all of the key sustainability actions that need to be addressed. The Sustainability Steering Group will also be responsibility for assigning a priority rating (high, medium or low), a nominated lead, timescales for completion as well as an indicative cost of the proposed action (if applicable). These actions are in the same order as the sections contained within the main body of this report.

No	Actions required	Indicative cost of proposed action where applicable
Governance		
1	Set up and hold the first SSG meeting.	
2	The SSG will be chaired by the Chief Executive and will be represented by clinical and non-clinical staff within the Trust together with external organisations as appropriate.	
3	At the first meeting of the newly established SSG, the recommendations from the Trust's Downside Planning – Transformation Plan will be scrutinised to identify the environmental sustainability benefits.	
4	Recruit a full time Sustainable Champion.	Self-funding
5	The Sustainability Champion will act as secretary to the SSG and he or she will coordinate full meetings of the group at least quarterly, as well as sub-groups on an ad-hoc basis to discuss specific environmental or sustainability issues.	
6	Appoint Sustainability Leads locally within departments who have a personal interest in the climate change and sustainable development.	
7	Sustainability performance reporting will be a standing item on the Trust Board agenda.	
8	The SSG will be charged with ownership of this management plan, its targets and its actions. Progress will be monitored against actions set within the plan, and new actions will be developed if performance trends are not in line with targeted trends.	
9	The climate change impacts and the challenges of sustainable development will form part of the Trust's risk register and Board Assurance Framework.	
10	Sign up to the NHS Good Corporate Citizenship Assessment.	
11	Performance against the national and local carbon emission reduction and other relevant targets will be monitored by the SSG and reported to the Trust Board. This information will also be presented as part of the Trust's annual report.	
12	Continue to identify sustainability matters as part of the 'walking the floor' carried out by the members of the Trust Board.	
13	Job descriptions will be updated and the annual appraisal process will be used to inform staff of their responsibilities pertaining to the achievement of the national and local carbon emissions targets together with specific objectives requiring staff to procure goods and services in the most sustainable way.	
14	Develop a mechanism that recognises and rewards those who introduce initiatives to reduce carbon emission.	

No	Actions required	Indicative cost of proposed action where applicable
15	The delivery plans will be designed by the Sustainability Champion to monitor the Trust's performance against the national sustainability targets. The Sustainability Champion will calculate the trends in sustainability impacts required to achieve these targets. Actual trends will be reported against the plan and reported to the SSG and the Trust Board. Where progress is insufficient to meet desired goals, the Sustainability Champion will present amendments to the SSG to supplement delivery plans.	
Patient pathways		
16	Undertake an exercise to fully understand the environmental impacts of its clinical operations to ensure sustainability is fully embedded into all of the Trust's operations and activities on a day to day basis.	
17	Continue to redesign clinical pathways and work closely with the relevant health, local government and private sector organisations as appropriate.	
18	The amount of carbon emissions the new patient pathways will save will be quantified, monitored and assessed to see whether all of the possible sustainability costs or benefits have been identified through the SSG ensuring that the lowest possible carbon patient pathway is developed.	
19	Where patient pathways already exist, the Trust will undertake an exercise to estimate and quantify the carbon emissions annual impacts to enable it to evaluation its performance against the sustainability targets (e.g. travel, water consumption, carbon emissions etc) which it has signed up to.	
20	Tailored objectives on how any costs (associated with the achievement of the targets) will be developed to ensure these can be monitored and minimised in line with the overall sustainability strategy.	
21	Staff that participate in the development of new patient pathways will be communicated with guidance on how sustainability impacts can be minimised. In addition, the sharing of good practice examples will be undertaken to ensure ownership of the sustainability agenda continues to grow at every level in the organisation.	
Procurement		
22	HPC will produce supplier best practice guidance. This should include recommended management information to be obtained through supplier contracts, for example the freight mileage and mode of transport associated with goods.	
23	The Trust will adopt the Flexible Framework (see Appendix B) to inform this SDMP and enable it to benchmark / monitor progress against.	
24	The PSC will sit on the SSG and be responsible for reporting progress against the Flexible Framework targets.	
25	Revise the Procurement Policy to ensure it is in line with the 'policy' expectations of the Flexible Framework.	
26	Identify staff from the Procurement Department who should attend the NHS PASA sustainable procurement training programme.	

No	Actions required	Indicative cost of proposed action where applicable
Energy		
27	The IT department will consider and report to the SSG on the use of network software to remotely reduce the use of energy generated by personal computers which are left on unnecessarily.	
28	The Sustainability Champion with the ESL will develop a delivery plan for energy efficiency, making use of the 'Enco2de' tool and include the: • Mechanisms for measuring, monitoring and reporting on energy consumption (which will be presented at the monthly SSG); • Identification of the nominated lead responsible for the energy delivery plan (e.g. Energy Sustainability Lead); • Identification of ways to minimise energy consumption, including turning down radiators, turning off lights etc; • Identification of ways to improve the use of energy e.g. solar panels, replacing inefficient boilers or lighting systems; • Explore the other opportunities for working remotely; and • Explore the opportunities for installing solar panels.	Funding opportunities should be available for EU grants and Salix for initiatives such as replacing ineffective lighting systems.
Water		
29	The Sustainability Champion with the Water Sustainability Lead will develop a robust water sustainability impact delivery plan, which should include the: • Mechanisms for measuring, monitoring and reporting on water consumption (which will be presented at the monthly SSG); • Identification of the nominated lead responsible for the water efficiency delivery plan (e.g. Water Sustainability Lead (WSL)); • Identification of ways to improve the efficient use of water across the Trust e.g. fitting hippo's into each toilet cistern (with nominated individual responsible for action and timescales for completion); and • Identification and reduction of water leaks within the Trust's estate. • Explore opportunities to harvest rainwater and then recycle for use within the hospital.	
30	Stop the routine use and purchase of bottled water. This would reduce water consumption, reduce carbon emissions and will demonstrate the Trust's commitment to sustainability.	

No	Actions required	Indicative cost of proposed action where applicable
Waste Management		
31	The waste policy (which is currently out of date), will be revised and will adopt the waste management hierarchy as follows: 1. Waste prevention (reduce) 2. Re-use 3. Recycle or compost 4. Energy recovery 5. Disposal As part of the recycle or compost section of the new waste policy will detail the new practice of using different bins for the separation of domestic waste and food compost	
32	The Sustainability Champion with the Waste sustainability Lead will develop a robust water sustainability impact delivery plan, which should include the: • Mechanisms for measuring, monitoring and reporting on waste management (which will be presented at the monthly SSG); • Identification of the nominated lead responsible for the waste management efficiency delivery plan (e.g. Waste Management Sustainability Lead (WMSL); • Identification of ways to minimise waste, including from clinical areas and hazardous waste without comprising current legislation and household/domestic waste going to landfill; • Identification of ways of improving recycling and / or composted of waste as applicable;	
33	All of the local sustainability leads will be responsible for encouraging colleagues: • To reduce carbon emission and consumption of energy/water • To make use of the new recycling facilities; • To make use of the new starch compost bags; • Not to put domestic waste into clinical waste bins; and • Other good housekeeping principles pertaining to reducing carbon, energy and water consumption.	
Travel and transport		
34	The Sustainability Champion will act as Travel co-ordinator and will be responsible for the development and management of a board-approved Trust Travel Plan. The Travel Plan should include: • The approach to parking charges in the short to long term. This will ensure that these charges are transparent and in line with the Trust's approach to sustainability and / or the result of any government directives; • Increase the level of staff who cycle to work. This will need to be supported by the necessary facilities to enable this to	Self-funding

No	Actions required	Indicative cost of proposed action where applicable
	happen e.g. shower, changing rooms, a comprehensive 'cycle to work' policy; and • Partnership working with other organisations especially with its local councils to draw upon council knowledge and experience together with raising the awareness of the travel requirements of Trust staff and patients.	
35	Review the expenses policy, in particular focus on the current business mileage rates for car users. Consider introducing a reimbursement scheme to discourage car use and encourage other modes of transport such as cycle, by foot or use of public transport etc.	
36	The Trust will strengthen its partnership working with the local authority to maximise the benefits of the new proposed Busway for the Luton and Dunstable area. To ensure that the network has the maximum possible benefits for both patients and staff. This should include the consideration of a shuttle bus stop at the Trust's entrance.	
37	Add in to the non-emergency transport contract a 'brake' clause to enable the Trust to make full use of efficiencies made through reducing transport emissions as part of its patient pathways.	
Estate management		
38	The Head of Estates will be a member of the SSG.	
39	Consideration will be given to establishing an Environmental Management System (EMS) for use by Estates that will support this SDMP.	
40	Carry out resource use profiling of each building in its estate covering energy consumption and water, which will identify actions to deliver efficiencies that can feed into the various sustainability impact delivery plans.	
41	Put in place the mechanisms to ensure that from 2015 all of the Trust's new buildings will be low carbon.	
42	All new buildings commissioned by the Trust will be BREEAM rated 'Excellent' from this point onwards. The Trust will also stipulate this as a contractual requirement in all future building and refurbishment contracts, and use BREEAM certified contractors where appropriate.	
43	All new builds and refurbishments will also consider how future demands are likely to change as a result of climate change. For example resistance to flooding and the need for sustainable driven low temperatures during future hotter summers.	
People and communication		
44	Develop a comprehensive sustainable development communication strategy to ensure the effective communication of this SDMP internally and externally.	
45	The draft sustainable development communication plan will be shared with relevant external stakeholders.	
46	A Trust-wide sustainability day should be held to introduce the relevant actions of the SDMP to staff, patients and visitors. This will	

No	Actions required	Indicative cost of proposed action where applicable
	also encourage sustainable development to be an ongoing feature.	
47	Staff induction training will include a session on sustainability to embed the Trust's sustainability aspirations.	
Partnership working		
48	The Trust will also continue to take an active role in shaping the sustainability agenda as part of the Luton Forum's LSP to achieve the NI 186 and 188.	
49	The Trust will share its SDMP with external stakeholders e.g. the Luton Forum, NHS Luton.	
50	The Trust's nominated representatives will regularly attend the regional network events organised by the SDU based in Cambridge.	
Finance and reporting		
51	The Trust will continue to action the points contained within the CRC EES implementation plan.	
52	The Trust will incorporate sustainability impacts into its project appraisal procedures using the proofing of an outline business cases tool (as set out Appendix D). All business cases for capital and substantial non-capital expenditure will incorporate long term analysis of the cost to the Trust, both in its use of financial and the environmental impacts. The Sustainability Champion will support with the training of staff in this new tool.	
53	Identify the funding opportunities or grants available from Salix or the European Union.	
54	Put in place arrangements to collect, monitor and report to the SSG, Trust Board on the following information: • Performance against individual delivery plans (summary to be presented to the Trust Board on a periodic basis); • Carbon emissions; • The use of finite resources (consumption of water and energy); and • The production and disposal of waste; • Carbon emissions from vehicles owned by the Trust and carbon emissions from official business travel using other forms of transport; • A summary of its involvement in the CRC EES, setting out its league table position and net costs/profits from the scheme (from 2011/12); • Each February a report covering the costs and benefits of the CRC EES in the prior year and the proposed carbon spend for the upcoming year. The proposed spend will be supported by data setting out prior year relevant carbon emissions and the expected growth or reduction in these emissions based on Trust delivery plans for the following year. *N.B. the first five bullet points will require inclusion as part of the Trust's Annual Report.*	

No	Actions required	Indicative cost of proposed action where applicable
55	The Trust's expenses system will be updated in readiness for collecting information on emissions from vehicles owned by public sector organisations and emissions generated from official business travel using other forms of transport.	
56	The Sustainability Champion will be responsible for converting the mileage into carbon emissions using the standard Defra conversion factors.	
57	The sustainability reports will be subject to regular external audit review to gain assurances on the quality of data and information being presented.	

Appendix B – Sustainable development case studies

Set out below are a number of case studies focusing on sustainable development within the public and the private sector.

Public sector case studies:

Trust/organisations name	Cast study
Cambridge University Hospitals NHS Foundation Trust	**Travel Plan** – The Trust has an 'Access to Addenbrooke's' strategy to encourage more sustainable and healthy methods of transport to the hospital. It includes the first ever NHS commissioned and managed public bus service and the Space Programme to encourage people to leave their cars at home.
Antrim Area Hospital	**Wind Turbine** - Antrim Area Hospital is an acute trust of 350 beds in Northern Ireland. It has installed the largest wind turbine at any UK hospital and is on track to save £90,000 a year in energy costs.
Bronllys Hospital	**Solar Energy** Project B - Bronllys Hospital is the first UK hospital to install solar panels on their roof. This will help to reduce pollution and carbon dioxide emissions, helping to tackle climate change, and save the hospital money.
Isle of Man	Isle of Man **Real Nappy Campaign** - Midwife pioneers reusable nappies in NHS maternity units to reduce clinical waste and raise public awareness of the product. Isle of Man government interest-free loans ensure that even the poorest families can afford this more sustainable option.
Norfolk and Norwich University Hospitals NHS Foundation Trust	As the first Trust to test the good corporate citizenship self-assessment model, Norfolk & Norwich University Hospital NHS Trust's **waste management** and **car share schemes** and the procurement of facilities management at Cromer Hospital were exemplified as good corporate citizenship in practice. The model looks set to be a useful tool in the drafting of the new Estates Strategy.
Nottingham University Hospitals NHS Trust	The Trust is working with Medical Waste Solutions to turn **clinical waste into building materials**. From April 2008, they anticipate that recycling up to 90 per cent of their clinical waste in this way will reduce road miles by approximately 50,000 miles per year significantly reducing transportation costs and carbon emissions from incineration.
The Rosie Hospital (part of Cambridge University Hospitals NHS Foundation Trust)	The Rosie Hospital **Energy Awareness Campaign** - This campaign challenged staff to come up with ways of saving energy or time, results showing that combining individually small and simple energy saving measures can have a significant impact on reducing energy consumption.
NHS South West	NHS South West's **cycle to work** scheme promotes healthier and zero carbon journeys to work. NHS South West rolled out a cycle to

Trust/organisations name	Cast study
	work scheme across the region, improving the health of its employees and encouraging trusts to become good corporate citizens.
St Georges Healthcare NHS Trust	St Georges Healthcare NHS Trust – The Trust has worked hard to reduce their carbon footprint, and has encouraged staff to **'Think Green'** with an initiative aimed to raise staff awareness and change behaviour around a wide range of issues.
NHS Accrington Pals	NHS Accrington Pals – is the one of the first NHS trusts to **harvest rainwater** from their buildings, in an initiative to reduce and recycle water. The benefits of collecting rain water from roofs and/or hard standings areas has been to re-use it for a variety of different appliances such as irrigation, laundry/dishwasher water supply, wash hand basins/showers, toilet flushing.
The Cornwell Food Programme	Three Cornish trusts are now **procuring food** from Cornish suppliers only, instead of sourcing sandwiches from as far away as Oxford, which will help to reduce carbon emissions from the transportation of goods.
Plowright Medical Centre	The new Medical Centre uses just 15.2 GJ of energy per $100m^3$ per year, far exceeding the NHS **energy efficiency** target. This equates to 31 tonnes of CO_2 per annum. To achieve this, the surgery was built to prioritise natural lighting and ventilation with features such as overhanging eaves to prevent overheating in summer, full-fill insulation and double glazing.

Source:

Sustainable Development Commission http://www.sd-commission.org.uk/ and other various websites.

Private sector case studies examples:

Organisation name	Cast study
YOUR M&S	M&S launched its **Plan A** in January 2007, which set out 100 commitments to achieve in five years. The Plan A has now been extended to 180 commitments to be achieved by 2015, with the ultimate goal of becoming the world's most sustainable major retailer. Through the Plan A, M&S is working with its customers and suppliers to combat climate change, reduce waste, use sustainable raw materials, trade ethically and help their customers to lead healthier lifestyles
Virgin atlantic	Virgin Atlantic is taking practical steps to make its business as sustainable as possible. It has set out all **29 steps** in its manifesto document. Virgin Atlantic is committed to reducing its environmental impacts where it can by becoming a more efficient business, leading the industry to practical and technical solutions and engaging, inspiring and empowering its staff and customers to help them meet the challenge
Other case studies are available from:	
CARBON TRUST	www.carbontrust.co.uk

Appendix C - The sustainable procurement flexible framework tool

Set out below is the sustainable procurement flexible framework self-assessment tool, which the Trust will be working towards.

	Level 1 - Foundation	Level 2 – Embed	Level 3 - Practice	Level 4 - Enhance	Level 5 - Lead
People	Sustainable procurement lead identified. Key procurement staff have received basic training in sustainable procurement principles. Sustainable procurement is included as part of a key employee induction programme. Foundation Level 1	All procurement staff have received basic training in sustainable procurement principles. Key staff have received advanced training on sustainable procurement principles. Embed Level 2	Targeted refresher training on latest sustainable procurement principles. Performance objectives and appraisal include sustainable procurement factors. Simple incentive programme in place. Practice Level 3	Sustainable procurement included in competencies and selection criteria. Sustainable procurement is included as part of employee induction programme. Enhance Level 4	Achievements are publicised and used to attract procurement professionals. Internal and external awards are received for achievements. Focus is on benefits achieved. Good practice shared with other organisations. Lead Level 5
Policy, strategy and communications	Agree overarching sustainability objectives. Simple sustainable procurement policy in place endorsed by CEO. Communicate to staff and key suppliers.	Review and enhance sustainable procurement policy, in particular consider supplier engagement. Ensure it is part of a wider Sustainable Development strategy. Communicate to staff, suppliers and key stakeholders.	Augment the sustainable procurement policy into a strategy covering risk, process integration, marketing, supplier engagement, measurement and a review process. Strategy endorsed by CEO.	Review and enhance the sustainable procurement strategy, in particular recognising the potential of new technologies. Try to link strategy to EMS and include in overall corporate strategy.	Strategy is reviewed regularly, externally scrutinised and directly linked to organisations' EMS. Sustainable procurement strategy, recognised by political leaders, communicated widely. Detailed review is undertaken to determine future priorities. New strategy produced beyond this framework.

	Level 1 - Foundation	Level 2 – Embed	Level 3 - Practice	Level 4 - Enhance	Level 5 - Lead
Procurement process	Expenditure analysis undertaken, key sustainability impacts identified. Contracts start to include general sustainability criteria. Contracts awarded on the basis of value-for-money, not lowest price. Procurers adopt Quick Wins.	Detailed expenditure analysis undertaken, key sustainability risks assessed and used for prioritisation. Sustainability is considered at an early stage in the procurement process of most contracts. Whole-life-cost analysis adopted.	All contracts are assessed for general sustainability risks and management actions identified. Risks managed throughout all stages of the procurement process. Targets to improve sustainability are agreed with key suppliers	Detailed sustainability risks assessed for high impact contracts. Project/contract sustainability governance is in place. A life-cycle approach to cost/impact assessment is applied.	Life-cycle analysis has been undertaken for key commodity areas. Sustainability Key Performance Indicators agreed with key suppliers. Progress is rewarded or penalised based on performance. Barriers to sustainable procurement have been removed. Best practice shared with other organisations.
Engaging suppliers	Key supplier spend analysis undertaken and high sustainability impact suppliers identified. Key suppliers targeted for engagement and views on procurement policy sought.	Detailed supplier spend analysis undertaken. General programme of supplier engagement initiated, with senior manager involvement.	Targeted supplier engagement programme in place, promoting continual sustainability improvement. Two way communication between procurer and supplier exists with incentives. Supply chains for key spend areas have been mapped.	Key suppliers targeted for intensive development. Sustainability audits and supply chain improvement programs in place. Achievements are formally recorded. CEO involved in the supplier engagement programme.	Suppliers recognised as essential to delivery of organisations' sustainable procurement strategy. CEO engages with suppliers. Best practice shared with other/peer organisations. Suppliers recognise they must continually improve their sustainability profile to keep the clients business.
Measurements and results	Key sustainability impacts of procurement activity have been identified. Simple measures based on achieving all aspects of the Foundation level of the flexible framework are put in place and delivered.	Detailed appraisal of the sustainability impacts of the procurement activity has been undertaken. Measures implemented to manage the identified high risk impact areas. Simple measures based on achieving all aspects of the Embedding level of the flexible framework are put in place and delivered.	Sustainability measures refined from general departmental measures to include individual procurers and are linked to development objectives. Simple measures based on achieving all aspects of the Practicing level of the flexible framework are put in place and delivered.	Measures are integrated into a balanced score card approach reflecting both input and output. Comparison with peer orgs. Benefit statements have been produced. Simple measures based on achieving all aspects of the Enhancing level of the flexible framework are put in place and delivered.	Measures used to drive organisational sustainable development strategy direction. Progress formally benchmarked with peer organisations. Benefits from sustainable procurement are clearly evidenced. Independent audit reports available in the public domain. Simple measures based on achieving all aspects of the Leading level of the flexible framework are put in place and delivered.

Appendix D - Sustainability proofing outline business cases

Purpose

- The purpose of this appendix is to set out the key considerations and issues involved in constructing a business case for the Trust's expenditure decisions (both capital investment and procurement).

- This determines the value for money implications of the Trust's expenditure decisions, whilst incorporating the need to consider the costs and benefits to society as a whole (drawing upon guidance from the OGC 5 Case Model and HM Treasury Green Book).

- The OGC 5 case model is shown in the diagram below, and forms a basis for the following sections.

Current state of play

There is currently no comprehensive guidance issued by Monitor, the NHS or Government on how to build sustainability into the preparation of business cases or investment decisions. Rather, there are various pieces of high-level general guidance or topic specific guidance (e.g. environmental issues in procurement, published by OGC) as well as more technical guides for valuing certain environmental costs and benefits associated with a particular policy change (e.g. calculating a shadow price of carbon such as that proposed in the Carbon Reduction Commitment). The latter can be seen as "add-ons" to the Green Book methodology.

There is also nothing in the business case appraisal guidance published by the OGC, NHS or PASA which refers specifically to sustainability. Rather, the Green Book methodology (which can be supplemented with some of the environmental cost/benefit valuation guides listed below) is referred to. Similarly, while BIS's guidance on Impact Assessments refers to environmental issues, readers are asked to see the Green Book/DEFRA publications (below) for specific advice on how to assess these.

Some of the key guidance documents available are set out below:

High level, general/department specific guidance to sustainable policy formation

"Stretching the web" (DEFRA website) - a "tool" developed with the aim of helping staff to integrate Sustainable Development into their policy making as well as project or programme work - pretty basic (developed from general principles of BERR Impact Assessments)

http://www.defra.gov.uk/sustainable/think/stretch/index.htm

Environmental issues in purchasing (OGC)

http://www.ogc.gov.uk/documents/Environmental_Issues_In_Purchasing.pdf

Planning policy statement: planning and climate change – policy for spatial planning (DCLG, 2005) - fairly broad and high level, obviously specific to DCLG/local government.

http://www.communities.gov.uk/documents/planningandbuilding/pdf/142520.pdf

Specific cost/benefit valuation methodology advice

Greenhouse gas policy evaluation and appraisal (DECC, December 2008) - fairly comprehensive guide to valuing changes to greenhouse gas emissions as an element of policy appraisal

http://www.defra.gov.uk/environment/climatechange/uk/ukccp/pdf/greengas-policyevaluation.pdf

How to use the shadow price of carbon in policy appraisal (DEFRA, 2008) - detailed guidance which is complementary to the above DECC publication. Please note that this is an update to previous interim guidance published in August 2007 which referred to the "Social Cost of Carbon" (as opposed to the "Shadow price of carbon"). There has been a recent debate on the concepts of "social cost of carbon" versus "shadow price" and which concepts are more appropriate in policy appraisal.

Examples of specific pieces of environmental valuation research

- Literature review: Economic, Social and Ecological Value of Ecosystem services[19]

- Developing measures for valuing changes in Biodiversity (DEFRA)[20]

- Valuing our Natural Environment Final Report (DEFRA) Valuation methods, literature overview and references[21]

- An Introductory Guide to Valuing Ecosystem Services December 2007 (DEFRA)[22]

OGC 5 case model: Building in Sustainability

The OGC business case model can be used to build sustainability considerations into each of its five key stages using the outline described below. In addition to describing the questions that should be considered, the case is illustrated through application to the example of a new Trust building (presented in the text boxes).

The illustrative example project we have used is the development of a new Trust centre for providing a new clinical service. This project would involve the procurement and / or adaptation of an existing site or number of sites. This is only an illustrative example of a large scale capital project for the Trust, and is no indication of future policy.

1. Strategic fit: the strategic case

- Is the need for intervention driven by sustainability considerations?

- Is there a strategic response to sustainability built into the business case?

- Does the project meet the strategic sustainability objectives and priorities of the Trust that have been outlined in the SDMP?

- Is there adequate engagement with strategic stakeholders about the sustainability objectives of the intervention?

- What are the trade offs inherent between economic wealth creation, environmental protection, and community development arising from the intervention?

- Has the right balance between short term priorities and longer term needs for the Trust been met?

- Does the intervention support wider NHS sustainability aims?

The example project offers the opportunity to improve some aspects of sustainability performance at the Trust by adapting an existing site(s), or constructing a new one. Improved sustainability performance could be achieved by

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[19] https://statistics.defra.gov.uk/esg/reports/ecosystem/default.asp

[20] https://statistics.defra.gov.uk/esg/reports/biovalue/default.asp

[21] http://www.hm-treasury.gov.uk/d/3(1).pdf

[22] http://ec.europa.eu/environment/nature/biodiversity/economics/pdf/valuing_ecosystems.pdf

improved building design, more efficient use of space, and a reduction in carbon emissions. However there could be some negative impacts - it may cause local difficulties with communities in the Luton and Dunstable area, and require patients and staff to travel further.

There are four levels of requirement for the needs and strategic drivers for the project's sustainability requirements:

1. **Services and directorates themselves:** some of the clinical / surgical services and directorates will have their own operational requirements which may set standards required for procurement and buildings. They will help identify the particular specialist requirements for each service or directorate to be considered alongside sustainability.

2. **Luton and Dunstable Hospital:** the Trust has an SDMP, and this sets targets and guidance, which should be considered. The development should also be consistent with the Trust's corporate strategy.

3. **Local government and partners:** there will be planning requirements, and may be development or regeneration requirements for the project specific to the Luton and Dunstable area. Secondly the Luton Forum strategic partnership may have some specific frameworks for projects built in the area which consider the needs of other NHS trusts, for example, as well as the environmental NI's enshrined in the Local Area Agreement.

4. **UK Government and NHS:** there are a number of standing requirements that could be applied to address some aspects of the project's sustainability.

Examples of the core needs of the facility should be incorporated in the sustainability assessment where they have a relevant impact. For example, the starting point for the project is the need to reduce costs of an existing facility or to provide a new one. Eco-efficiency measures introduced in the new project could enhance the performance against this requirement. There are other examples of positive impacts that are linked to the other strategic drivers for the project:

- Decrease idle buildings standing empty, some of which may be consuming resources.
- Reduce the level of resource use per square foot of space.
- Use size to justify investment in either a higher quality design or low carbon energy generation systems on a larger site.

In addition consideration should be given to the negative as well as the positive sustainability aspects to the proposed project, especially increased travel and local community impacts, as discussed above. The business case must seek to identify the costs or qualitative considerations into an overall assessment and a solution proposed for the facility. Effort should be made to compare like with like where at all possible.

The assessment must give consideration to both the immediate requirements of the patients, staff and other operators and the longer term requirements from NHS policy and the ongoing local community requirements (to 'future proof' the investment). Lastly the business case must seek to identify stakeholders and identify if they have other strategic drivers for the project. The project should seek further interaction with these stakeholders to be incorporated at the relevant stage in the project.

2. Options appraisal: the economic case

- Have the sustainability impacts been adequately identified?

- Have the costs and benefits relating to society as a whole been considered, and can the positive and negative externalities be measured?

- Have whole life costs been taken into account (e.g.: acquisition, capital, recurrent, disposal expenditure)?

- How do the options perform in tackling climate change and reducing carbon emissions?

- What approach to carbon pricing is appropriate (e.g.: social cost of carbon, marginal abatement cost, market price, shadow price of carbon approaches)?

- What are the sustainability outcomes?

- How will the sustainability outcomes be realised?

Costing the project requires the examination of the costs and benefits at different levels:

1. capital costs of the project,
2. whole life cycle costs of the project to the operators,
3. wider costs to society.

At the economic level the business case should highlight the wider impacts on society through a social cost benefit approach. This would attempt to address the issues of external costs arising from the project. Where available the business case should use techniques as specified in the Treasury Green Book. For this project it would require an assessment of the aspects listed in the Green Book including biodiversity, noise, climate change, air quality, landscape and water.

The business case should identify the significant impacts from this list, which is most likely to include climate change, landscape and water. Climate change impacts should be costed into the economic case by using the shadow price of carbon developed by DEFRA / DECC, rather than the initial price of Carbon outlined in the CRC (£12 per tonne) since this will fluctuate and tend towards a market price as the CRC reaches maturity. The other impacts may only be incorporated through a qualitative assessment (see impact appraisal tool in Appendix F) if no quantitative analysis of the cost of the impact is possible.

In addition social impacts from the project should also be assessed. These can be analysed for the areas under consideration for the project, and should include:

- Impact on Luton and Dunstable's economy and role in any proposed regeneration activities;

- Impact on local communities and identification of positive contributions that the project can make to people living near the sites under consideration for the project; and

- Impact of transport infrastructure and consideration of the impacts of travel to and from the site for different options.

The combination of the environmental and social impacts should be incorporated alongside the economic outcomes to enable comparison of different options. The business case must also include information on how these will be achieved through the appointment of designers, consultants and contractors who are capable of meeting the selected standards.

3. Commercial aspects: the financial case

- Do the procurement options include environmental aims and objectives, and are there identified priorities?

- Have these been identified at the outset, rather than as a set of add ons?

- Will the intervention be procured in a way that promotes sustainable development whilst still achieving optimum whole life value for money?

- Does the intervention meet Defra/OGC's Quick Wins criteria (i.e.: a list of minimum environmental specifications for a range of commonly purchased items)?

- Do contracts include appropriate sustainability requirements?

In the case of this new facility, there are existing tools and methodologies that can be used for a detailed understanding of the sustainability impacts. Firstly there are design standards that would incorporate many of the impacts from the buildings. Secondly development checklists exist for consideration of new built environment projects. Thirdly the NHS and other government bodies have put forward standards such as Framework for Sustainable Development on the Government Estate buildings and other bodies have proposed Integrated Assessment Methodologies.

For the buildings the project should meet BREEAM standard Excellent or an equivalent – this should be specified in the business case. In addition the business case should identify the other appropriate tools for use in the implementation of the project – either the DEFRA guidelines mentioned above or appropriate regional guidelines that supersede these requirements. This framework must be built into the Environmental Impact Assessment or Strategic Impact Assessment used for the project.[23]

Although these methodologies exist, there are no fully agreed guidelines for whole life costing of buildings. However, the business case should attempt to evaluate more than the capital costs of each option. Consideration must be given to the use phase for the buildings and potential cost from future redevelopment options. At a minimum the project must consider operational costs against capital investment to reduce those costs.

For carbon costing the project must compare alternative emission reductions options. The alternatives should be considered against each other, on a normalised basis (i.e. reductions per tonne of carbon reduction). In addition the

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[23] EIA or SEA will depend on the size of the project and the requirements of the local planning authority.

abatement costs of the project should also be considered against the shadow price of carbon. Whilst the capital available for the project may not be sufficient, the level of abatement justified by the external price of carbon should be included in the analysis.

In addition the business case for the example project should demonstrate how it will incorporate DEFRA's quick wins in the procurement, and if not provide reasons for failing to comply with this guidance. Similarly the project must show that it can contribute to the standards laid out for Sustainable Operations on the Government Estate for carbon emissions, energy efficiency, water consumption and waste recycling[24].

The procurement method must be designed not to remove any of the sustainability requirements for the project. If it is to be procured through a Private Finance Initiative then the contracts must require that this analysis is carried out by the providers.

4. Affordability: the financial case

- Is there sufficient data collection and evaluation of supplier information for procurement decisions?

- Has value for money (VfM) been assessed over the whole lifetime of the intervention, including disposal (either sale proceeds or decommissioning costs), estimating the costs and benefits to society as a whole, and not simply those directly relevant to the purchaser (e.g.: environmental impact as set out in Green Book).

- Does the VfM analysis consider eco-efficiency opportunities?

- Has the opportunity cost of use of financial resources been adequately considered, such as those arising from the negative cash flow effect arising from associated CRC liabilities?

- Have innovative funding sources been considered (e.g.: forward funding of infrastructure investment through hypothecating revenue streams)?

- Has payback been assessed over a longer timescale?

- Is there an opportunity to participate in NHS collaborative procurement programmes, or received capital funding from a Government assisted carbon reduction scheme?

As described above some attempt must be made to assess the life cycle costs of the building. This should include comparison of different standards used in the building and the comparative contribution to long term financial performance. Life cycle costing should present the analysis in the format of a discounted cash flow analysis. This analysis should incorporate planned eco-efficiency and other cost effective measures reducing operational cost of the option.

The project costings should be considered over the useful asset life. Standard discount rates should be used and a sensitivity analysis should be carried out to determine the long term impacts of options with a lower sustainability performance over the life of the facility.

Decisions on the source of funding should consider how the sustainability impacts would be managed through the selected delivery mechanism.

5. Achievability: the project management case

- Do the performance management systems incorporate sustainability objectives?

- Have sufficient resources been dedicated to realise the sustainability benefits?

- Is accountability for delivering the sustainability objectives clear?

- Are standards in line with sustainability principles?

- Are there key performance indicators for sustainability in contracts?

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[24] http://www.ogc.gov.uk/sustainability_soge_targets.asp

Appendix E – Generic competencies

Set out below is a generic set of competencies that will be used to ensure that the sustainability targets signed up to by the Trust will be achieved. These competencies will be built into job descriptions, person specifications and feature as part of the personal development process to ensure all staff are held accountable for reducing carbon emissions.

Trust Board

- The Board will be collective responsible for achieving the targets set out within this document and will review performance data on a monthly.

Sustainability Champion

- A comprehensive knowledge of the sustainability agenda and the forthcoming legal requirements.
- Responsible for leading on the sustainability targets across the Trust.
- Ability to set up and drive forward the carbon and energy reduction, climate change awareness campaign.
- Organise and publicise events relating to sustainability.
- Continuously identify carbon, energy and water reduction initiatives.
- A track record of realising cost savings opportunities and achieving targets.
- Excellent communication skills.
- Ability to produce clear, high quality reports.
- Ability to analyse and interpret complex data.
- Possesses the necessary negotiation skills.
- Ability to offer and develop effective training on sustainability.
- A proven track record of effective project and programme management skills.
- Ability to find funding or other income to assist with the SDMP objectives.
- Be responsible for the Energy Efficiency Scheme.
- Conduct investment appraisals.
- Contribute to ERIC returns.
- Nurture partnerships with external stakeholders and partners to ensure delivery of the sustainability agenda.

Sustainability Leads

- Responsible for encouraging colleagues to reduce carbon emissions and consumption of energy/water.
- Identify (with the Sustainability Champion) initiatives to reduce carbon emissions and reduce energy and water consumption.
- Support the Sustainability Champion with the internal and external campaigns to support the achievement of targets set out within this document.

All other Trust staff

- Make a personal commitment and contribution to reduce carbon emissions, energy/water consumption year on year.

Appendix F - NHS PASA support for trusts

Sustainable Procurement Network

The Sustainable Procurement Network (SPN) has been formed to provide support and share information on how the NHS is making its procurement decisions more sustainable. Sustainable procurement is an essential part of doing procurement well. It is about considering the social, environmental and economic impacts of procurement from a whole life perspective.

Members of the SPN can be contacted for support on sustainable procurement issues, either regionally or nationally. All members have participated in the Sustainable Procurement Training Programme at the University of Bath and have access to a range of information and resources.

In Securing the Future - the UK Government's new strategy for sustainable development, there is a strong emphasis placed on the role of government to lead by example, especially through sustainable procurement. Members of the network are actively seeking to improve the outcomes of their procurement decisions, and achieve true value for money by sharing examples, discussing work they are doing and helping other NHS procurement professionals who are looking to make changes.

Training

NHS PASA, working with the Centre for Research in Strategic Purchasing and Supply (CRiSPS) and the Centre for Research in Education and Environment (CREE) has developed a sustainable procurement training programme to research the dimensions of sustainable procurement and how to implement this in practice.

The programme incorporates the following elements:

1   Developing a practical understanding of what sustainable procurement means in the NHS, and how to implement it;

2   Working on sustainable procurement topics through both face to face sessions and an e-learning environment;

3   Investigating the contribution of public procurement and supply to sustainable development and the health inequalities agenda;

4   Researching the learning process and how to encourage best practice behaviour in procurement professionals; and

5   Establishing trained reference contacts throughout the NHS to enable each region to address sustainability issues through procurement.

The participants in the course will be divided into groups. Each group will look at one of the following areas and develop a presentation session. The project areas are:

- Working with small to medium enterprises and social enterprise;

- Local sourcing;

- Sustainable food chains;

- Environmental supply chain development;

- Ethical supply chain development; and

- Encouraging sustainable innovation.

Following the delivery of the presentation sessions at the end of each course, all participants have an understanding of these key areas of sustainable procurement and be in the position to provide guidance to other NHS staff on how to integrate issues of sustainability in practice. During the course the practical elements of sustainable procurement are identified, adding to research and wider government objectives on this topic.

The course is aimed at buyers from NHS PASA and NHS trusts. Managers will be expected to assist with the selection process to ensure an adequate regional and skill representation is included in each course to ultimately act as sustainable procurement reference contacts for the NHS. Participants may represent trusts, confederations, hubs or NHS PASA.

By the end of the course participants will have:

- Developed knowledge in key aspects of sustainable procurement, covered in the initial workshop and online tutorials;

- Conducted research on a key sustainable procurement topic and developed key pointers for how this can be integrated into procurement practice;

- Delivered a group presentation to the rest of the course participants and interested parties, which will form part of the sustainable procurement resource to share throughout the NHS;

- Developed knowledge that will allow them to act as a reference contact for sustainable procurement in their region for the NHS; and

- Developed a network of contacts that can assist in sharing knowledge and best practice.

Further information is available on the NHS PASA procurement website:

http://www.pasa.nhs.uk/PASAWeb/NHSprocurement

- Are reporting processes and practices in place as well as KPIs?

- Has dissemination and communication with stakeholders been effective and aimed at encouraging behaviour change?

- What incentives (financial and others) are in place to support behavioural change and reductions in environmental impact?

- Is there a framework in place for responsible operation and maintenance?

- Are there mechanisms to ensure sufficient data collection and evaluation of supplier's compliance as part of contract management?

The business case should set out the governance structure proposed for developing the project. This must assign overall responsibility to the individuals within the structure of the project. The project cost should include an assessment of the costs of meeting the sustainability standards laid down for the project. Reporting on the progress towards these goals should be included within the overall reporting structures for the project.

In addition the project needs an engagement plan for work with local and overall project stakeholders. This should be built into the timescales for the project, responsibilities should be assigned and activities costed into the project plan.

Lastly the framework used for assessment of environmental impacts should include a plan for the ongoing management of the impacts in the use phase of the project. Whilst these may not necessarily be included in the business plan, transition arrangements for the passing of responsibility from the development team to the management team must be recognised. The plan should also incorporate sufficient training and handover between the two teams.