

Sustainability Development Management Plan (SDMP)

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Trust Board paper L

Executive Summary

Context

Apart from the legal obligations, such as the Climate Change Act 2008, Health and Social Care Act 2012 and the Public Services (Social Value) Act 2012, the Sustainability Development Unit (SDU) requires all NHS organisations to produce a Board approved Sustainable Development Management Plan (SDMP). This plan aligns to the SDU guidance. The continued adoption of the Premises Assurance Management Tool (PAMs) and Compliance Assurance Assessment System (CAAS) shall allow a positive response to the ERIC 2016-17 return and give the CQC the assurance of the Trust commitment to the Sustainability agenda.

Questions

1. If the SDMP is not implemented what would be the general outcome?
2. If the SDMP is not implemented what would be the operational impact?
3. If the SDMP is not implemented what would be the impact to patients?

Conclusion

1. The implication of not adopting the SDMP implies a non-acceptance/willingness to accept the Trust's obligation to comply with the relevant three Acts above and the requests of the SDU. Also would result in a negative return within the CAAS, PAM and ERIC returns with a potential advisory statement from the CQC of "inadequate".
2. The impact of not adopting the SDMP would be an increase in consumption and resources with the relevant additional costs. It would be a lost opportunity to operate our services in a more efficient manner.
3. The impact to patients would be a reduced level of services at the point of need as the Trust would prioritise its own reducing resources to provide the essential elements of the healthcare required.

Input Sought

We would welcome the Board's input regarding this Sustainability Development Management Plan and recommend it is formally approved by the Trust Board.

To enhance the Plan, and before publishing it, we recommend that a Foreword from the Chairman is included. This would give a positive message internally and externally that "Sustainability" is taken seriously and the whole organisation is willing to accept its obligation to reduce the Trust's overall impact on the environment. This would improve the health of the local and surrounding population and could reduce our operational running costs.

For Reference

Edit as appropriate:

1. The following objectives were considered when preparing this report:

Safe, high quality, patient centred healthcare	[Yes]
Effective, integrated emergency care	[Yes]
Consistently meeting national access standards	[Yes]
Integrated care in partnership with others	[Yes]
Enhanced delivery in research, innovation & ed'	[Yes]
A caring, professional, engaged workforce	[Yes]
Clinically sustainable services with excellent facilities	[Yes]
Financially sustainable NHS organisation	[Yes]
Enabled by excellent IM&T	[Yes]

2. This matter relates to the following governance initiatives:

Organisational Risk Register	[Yes]
Board Assurance Framework	[No]

3. Related Patient and Public Involvement actions taken, or to be taken:

There will be an element of engagement with both patients and the Public as the SDMP is implemented.

4. Results of any Equality Impact Assessment, relating to this matter:

There will be an element of equality impact but the level will be dependent on the actions and changes the SDMP generates.

5. Scheduled date for the next paper on this topic: [TBC]

6. Executive Summaries should not exceed 1 page. [does comply]

7. Papers should not exceed 7 pages. [does not comply]

Sustainability Development Management Plan (SDMP)

2017

DRAFT

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FOREWARD FROM THE CHAIRMAN

EXECUTIVE OVERVIEW

The University Hospitals of Leicester NHS Trust (UHL) is required by the NHS Sustainability Development Unit (SDU) to have in place a Sustainable Development Management Plan (SDMP) which must have been approved by the Trust Board or governing body within the time period covered by the plan e.g. in this case 5 years.

The SDMP is an approved Department of Health (DH) process developed by the SDU which has given its interpretation of the UK Governments obligation to comply primarily with the Climate Change Act 2008. It also aligns with the Health and Social Care Act 2012, Public Services (Social Value) Act 2012 and the revised Care Quality Commissions – Priority 1 Encourage improvement, innovation and sustainability in care.

The Civil Contingencies Act 2004 (CCA) establishes a clear set of roles and responsibilities for those involved in emergency preparation and response at the local level. It requires organisations in the health system (emergency services, local authorities, NHS bodies) to prepare for adverse events and incidents.

Organisations must demonstrate they have undertaken risk assessments, and that Carbon Reduction Delivery Plans are in place in accordance with emergency preparedness and civil contingency requirements.

The NHS Statement on Internal Control is an annual reporting requirement for NHS organisations and will help them meet their CCA obligations. It provides assurance that resources are being appropriately managed. It includes mandatory disclosures on climate change adaptation and mitigation ensuring that risk assessments have been undertaken and plans are in place to comply not only with the Climate Change Act but also with the Civil Contingencies Act.

There is also a link to the Lord Carter recommendations which hoped to encourage the Department of Health to set up an 'invest to save energy efficiency fund' by April 2017 (no details to date), working in partnership with Salix (who provide interest free capital loans) and other partners, to help trusts deliver the opportunities for reduced energy consumption as may be within the Trusts SDMP.

As an acceptance of our obligations and responsibilities UHL will enact the guidance given by the SDU. The SDMP details the implications of the growing scientifically accepted threat and effects of climate change. While this may be seen as a consequence of the action of others, the fact and issue is that we all have an obligation to participate in limiting this threat. We understand that we need to embed a culture that enables early adoption, adaptation and innovation to be driven throughout our organisation and into the core of the health services we deliver. There will also be a close working relationship across Leicester, Leicestershire and Rutland (LLR) to ensure consideration is given within the Sustainability and Transformation Plan.

Under the Climate Change Act 2008 (CCA) all organisations in the UK are committed to reducing their carbon emissions by 34% by 2020 and 80% by 2050 (based on their 1990 baseline). In addition the NHS have committed to leading the public sector in this area and have set interim reduction targets to ensure the healthcare sector stays focused to achieve these reductions; these are 10% by 2015 and 60% by 2030. As accurate base lining data is not available for 1990, the NHS has recommended a 28% reduction from the 2013 baseline data by 2020. All figures presented within this document use this 2013 baseline. UHL's baseline position for 2013 is 41,334 tonnes of CO₂ (tCO₂). A reduction of 28% from this baseline position represents a reduction of 11,574 tCO₂ down to 29,760 tCO₂ by 2020. Data for 2015-16 shows that the emissions had been reduced to 36,138 tCO₂ (12.6% reduction), with a relevant spend on Energy of £7.90M. It is envisaged that confirmation of the 2016-17 emissions data will show a reduction to 34,000 tCO₂ representing an overall reduction of 17.7% from baseline position. To achieve the 28% overall target will require a further 10.3% in the remaining 3 years up to 2020.

To achieve the above we will develop a revised 5 Year Estates and Facilities strategy to reflect the vision of the current Development Control Plan and incorporate the principle and guidance from the SDU and the current Hospital Technical Memorandum (HTM) 07-02 EnCO₂e throughout the estate.

The Carbon Reduction Commitment Energy Efficiency Scheme (CRC) is a mandatory energy efficiency scheme affecting the majority of larger healthcare organisations, particularly NHS Trusts. The scheme's aim is to improve energy efficiency, reduce carbon emissions and save organisations money by reducing fuel bills. It will also help drive changes in behavior, infrastructure and generate corporate awareness of emissions. Participating organisations are required to report their baseline energy use and their carbon emissions in their annual reports. UHL is registered as a full participant and last year had a calculate payment to the Environment Agency of £371,175 with an associated reported emission of 21,963 tCO₂.

Through our internal & external engagement, we have embarked on a carbon management project which has quantified the actions already in place, and identified further opportunities for achieving our goals and become one of the most sustainable Trusts in the UK.

Having a current annual energy, water and waste spend of some **£7.90M**, and a direct carbon emission of **33,799** tonnes of CO₂, we have undertaken a review of our current position, and the approach we are now taking is in line with good corporate practices and the SDU's guidance (Jan 2017) "Areas of Coverage" as listed below.

The listed "Areas of Coverage" will be reviewed to ensure that energy, water and waste are not the only consideration, but to include travel & transport, Anaesthetic Gases, Pharmaceuticals, Medical Devices, Sustainable food, procurement, Leadership, engagement & development, Healthy, sustainable and resilient communities, Sustainable clinical and care models, Innovation, Metrics, Social value and will focus on the following aspects within them, to ensure that UHL becomes one of the leading Teaching Trusts to have its achievements and improvements of the sustainability agenda recognised nationally.

- **Carbon Hotspots Group A** (Energy, heating, lighting, ventilation, water)
- **Carbon Hotspots Group B** (Anaesthetic Gases, Pharmaceuticals, Medical Devices)
- **Carbon Hotspots Group C** (Travel and Transport)
- **Carbon Hotspots Group D** (Clinical and Domestic Waste Management)
- **Commissioning & Procurement** (Sustainable food, Commissioning for sustainable development)
- **Leadership, engagement & development A** (Organisational and Workforce Development)
- **Leadership, engagement & development B** (Governance)
- **Healthy, sustainable and resilient communities** (Adaptation planning, Community engagement)
- **Sustainable clinical and care models** (Sustainable pathways, Patient and Clinician led service redesign)
- **Innovation** (Evidence of how the providers will support innovation in sustainability)
- **Metrics** (Targets, Annual reporting commitment)
- **Social value** (Environmental improvement, Local Social Capital, Local Economic Value)

At the heart of the programme is the need to lead change, and we need to adopt the "UHL WAY", as we all need to consider our individual and corporate contributions, and opportunities to create a sustainable way of delivering health care with reduced resources.

1. APPROACH

Engagement and data collection was commenced, were 7 sets of interviews with senior and middle management, 4 workshops with 14 NHS Trust members and reviewed 11 strategic documents to understand the Trust’s challenges, its strengths and its sustainability performance to date. In addition a gap analysis of the Trust’s internal strategies against best practice examples was carried out to establish where there might be gaps in compliance. It is recommend to use a ‘Five Capitals Model of Sustainability’ (natural capital, human capital, social capital, manufactured/ buildings capital and financial capital) with the aim of UHL to deliver Caring at it’s at Best without degrading any of its capitals and eventually enhancing them.

How the strategy fits with the model is shown below:



Sustainability for UHL Trust means:

“Meeting the healthcare needs of the present without compromising the ability of future generations to meet their own healthcare needs.”



To ensure that the whole organisation is working in harmony it needs to consider each of the sustainable capitals rather than just the energy used and apply these to our corporate commitment.

“Safe, High Quality, Patient-centered, Efficient Care”

The table below details the areas of coverage, expanded within the workstreams at Section 6.

Necessary (Y)	Expected, where applicable(E)	Optional, where applicable (O)	Not applicable (NA)	
Area of coverage		Large providers	Small providers	Commissioners
1. Corporate Vision				
Corporate Vision and Governance	Y	Y	Y	
2. Carbon hotspots				
Energy	Y	Y	Y	
Travel and Transport	Y	Y	Y	
Waste	Y	Y	Y	
Water	Y	Y	Y	
Anaesthetic gases	Y	E	NA	
Pharmaceuticals	Y	O	Y	
Medical devices	Y	O	NA	
3. Commissioning and procurement				
Sustainable food	Y	Y	NA	
Commissioning for sustainable development	E	O	Y	
4. Leadership, engagement and development				
Benchmarking performance of suppliers/providers/peers		E	Y	
Supply chain engagement	Y	E	Y	
Workforce/Staff engagement (GCC)	Y	Y	Y	
Service user and public engagement	Y	Y	E	
Board engagement	Y	O	Y	
5. Healthy, sustainable and resilient communities				
Adaptation planning	Y	Y	Y	
Community engagement/ collaboration	Y	E	Y	
6. Sustainable clinical and care models				
Sustainable pathways	Y	E	Y	
Patient and Clinician led service redesign	Y	Y	Y	
7. Innovation				
Evidence of how the providers will support innovation in sustainability	Y	E	Y	
8. Metrics				
Targets	Y	Y	Y	
Annual reporting commitment	Y	Y	Y	
9. Social Value				
Evidenced use Public Service Act to leverage local:	Y	E	Y	
a) Environmental improvement				
b) Local Social Capital	Y	E	Y	
c) Local Economic Value	Y	E	Y	

The “Areas of Coverage” have already had an initial review and have generated the relevant work streams noted below and are further explained within Section 6 and action plans within appendix 1 this has ensured that energy, water and waste are not the only considerations, but to include travel & transport, Anaesthetic Gases, Pharmaceuticals, Medical Devices, Sustainable Food, Procurement, Leadership, engagement & development, Healthy, sustainable and resilient communities, Sustainable clinical and care models, Innovation, Metrics, Social value and will focus on the following aspects within them, to ensure that UHL becomes one of the leading Teaching Trusts to have its achievements and improvements on the sustainability agenda recognised nationally.

- **Carbon Hotspots Group A** (Energy, heating, lighting, ventilation, water)
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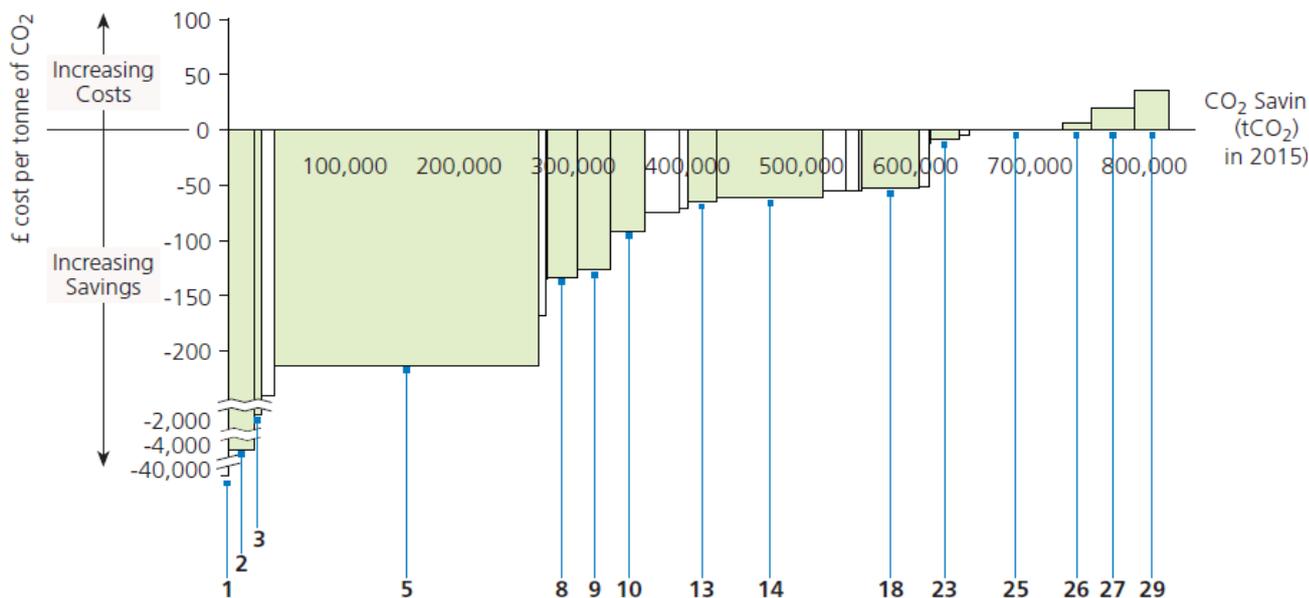
The initial review has generated the following overarching objectives of the plan:

- Reduce the utility carbon footprint by 28% by 2020 (based on a 2013 baseline) currently achieved an 18% reduction therefore a 4% Year on Year is required to achieve the target
- Reduce the water consumption by 10% by 2020 (based on a 2013 baseline) 3% Year on Year UHL target
- Reduce the waste arising per patient by 5% by 2020 (based on a 2013 baseline) 1.5% Year on Year UHL target
- Integrate sustainable and ethical procurement practices into the UHL's procurement strategy, policy and processes for all goods, food and services
- Embed sustainable behaviours through active change , awareness programmes and developing a group of "Energy / Environmental Champions"
- Actively deliver the UHL's vision , values and support the delivery of Changing Lives & Wellbeing agenda, through our sustainability plan
- Develop robust monitoring, reporting and targeting processes to ensure 2020 aspirations are achieved
- Actively engage with our communities, external agencies and the public, focusing on areas which actively reduce health and social inequalities through sustainable actions and behaviours
- Develop a robust adaptation plan to mitigate the effects of extreme hot and cold weather and flood
- Develop a robust business continuity plan to ensure resilience of services and supplies as regards to failure and civil disturbance
- Reduce financial risks and minimise exposure to future financial cost pressures
- Activity encourage a model shift in travel and transport methods to a more active & sustainable modes
- Establish a Corporate Social Responsibility (CSR) statement and to promote the UHL's "How we do it" and lead the way for the NHS
- Deliver innovation

The Mac Curve below give an indication to the potential saving that could be achieve by various engineering solution and technologies that will be considered within the Carbon Hotspots. For each option considered and a business case formulated to confirm

- a) Value for Money
- b) Spend to Save is viable and payback is with acceptable parameters
- c) The necessary funding secured by internal or externally
- d) Monitoring of the scheme is resourced and maintained

Figure 2: NHS England MAC Curve



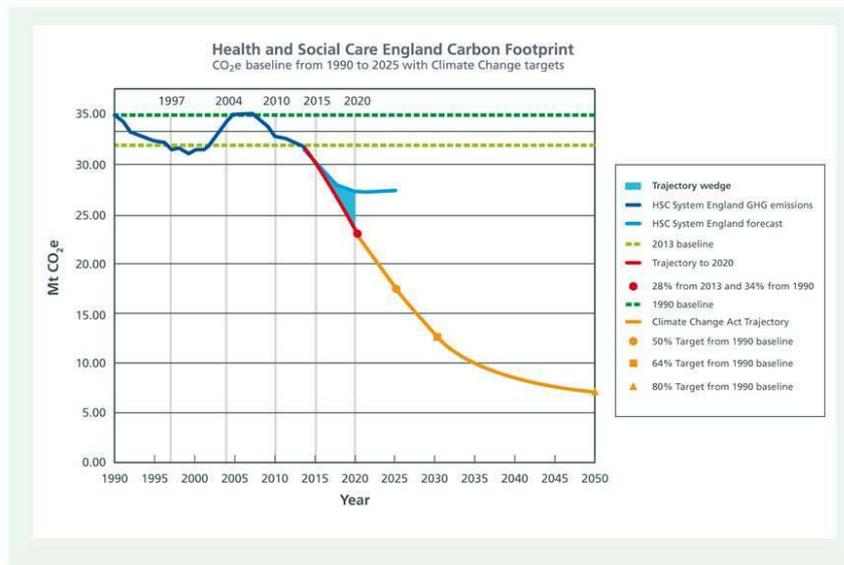
This table illustrates just some of the carbon saving measures that the NHS could implement. Not all are numbered above. Some CO₂ savings are too small to depict on this scale of graph.

	(£/tCO ₂) - savings + costs	CO ₂ Savings (tCO ₂ /yr)	£000 Savings (£000/yr)
1 Packaging of medical equipment	-40,299	2	+81
2 Reduce drug wastage	-3,987	22,430	+89,428
3 Teleconferencing to replace 5% of business miles	-2,038	6,827	+13,913
4 Decentralisation of hot water boilers in non-acute/PCT	-240	10,612	+2,547
5 Combined Heat and Power installed in acute trusts	-213	232,331	+49,487
6 Variable Speed Drives	-168	5,508	+925
7 Introduce hibernation system for ambulance stations	-135	1,096	+148
8 Improve heating controls	-134	26,551	+3,558
9 Improve lighting controls	-127	29,686	+3,770
10 Energy efficient lighting	-91	30,140	+2,743
11 Voltage optimisation	-75	29,364	+2,202
12 Improve the efficiency of chillers	-71	7,313	+519
13 Roof insulation	-65	25,928	+1,685
14 Energy Awareness Campaign	-61	92,549	+5,645
15 Building Management System optimisation	-56	20,610	+1,154
16 Improve Insulation to pipework, and/in boiler house	-55	11,195	+616
17 Install high efficiency lighting/controls - ambulance trusts	-55	2,999	+165
18 1 degree C reduction in thermostat temperature	-53	49,144	+2,605
19 Improve the efficiency of steam plant or hot water boiler plant	-52	8,933	+465
20 Upgrade garage and workshop heating	-49	214	+10
21 Boiler replacement/optimisation for HQ/control centres	-12	171	+2
22 Improve building insulation levels in ambulance trusts	-12	951	+11
23 Wall insulation	-8	25,928	+207
24 Office electrical equipment improvements	-4	7,957	+32
25 Travel Planning	0	81,524	0
26 Insulation - window glazing and draught proofing	+6	25,928	-156
27 Electric vehicles	+19	36,969	-702
28 Wind Turbine	+25	245	-6
29 Biomass Boiler	+35	30,533	-1069
Total		823,638	179,987

2. THE VALUE AT STAKE

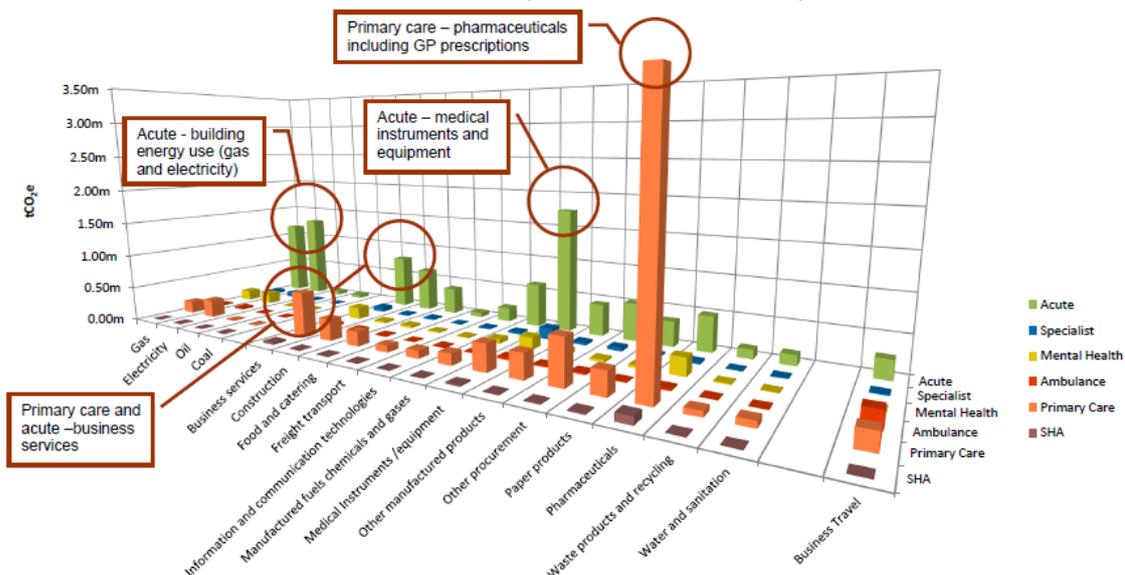
The University Hospitals of Leicester NHS Trust's (UHL) sustainability strategy will be supported by a comprehensive live Sustainable Development Management Plan (SDMP) which will detail the delivery mechanisms for the strategy.

The SDMP objectives are also supported by the revised 5 year Estates and Facilities strategies. Under the Climate Change Act 2008 (CCA) all organisations in the UK are committed to reducing their carbon emissions by 34% by 2020 and 80% by 2050 (based on 1990 baseline). In addition the NHS have committed to leading the public sector in this areas and have set interim reduction targets to ensure the healthcare sector stays focused to achieve these reductions; these were 10% by 2015 and 60% by 2030. As accurate base lining data is not available for 1990, the NHS has recommended a 28% reduction and to use the 2013 data as the baseline. All figures presented within this document use this 2013 baseline. The graph below indicates the trend line which UHL has modelled it SDMP objectives as to enable it be one of the Trusts noted in the future as achieving the nationally set target.



NHS England CO₂e emissions from 1990 to 2020 with Climate Change Act

Goods and Services carbon footprint – carbon hotspots

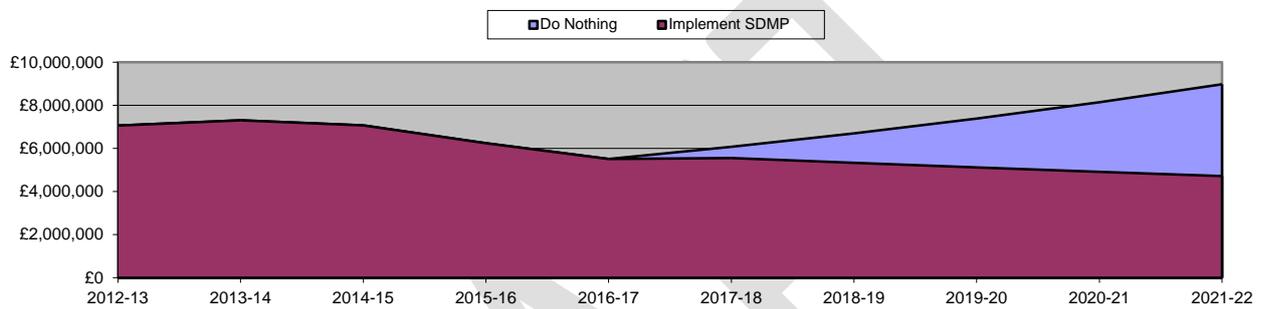


The graph above indicated the areas which have been highlighted as “Carbon Hotspots” and the “Green” Acute are among our SDMP objectives to target these elements.

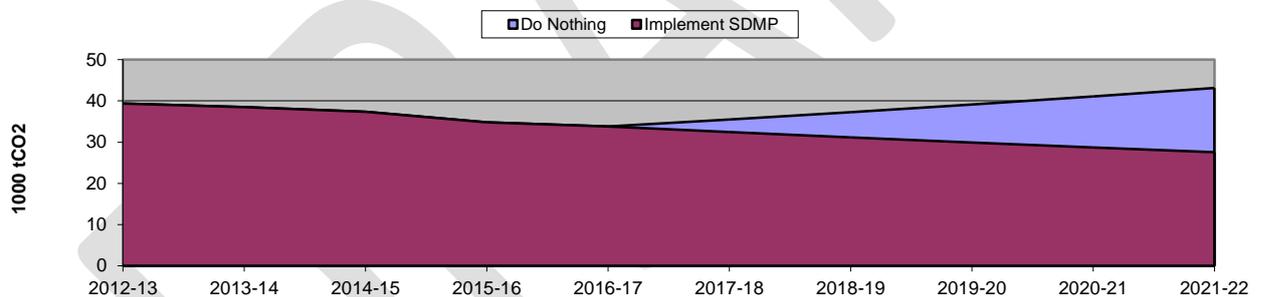
NHS England hotspots summary

- Pharmaceuticals are 22% of the NHS England carbon footprint of which:
 - o 79% is in primary care and community services
 - o 13% is in acute services and 5% in mental health services
- Medical Instruments account for 13% of the NHS England carbon footprint of which:
 - o 75% is acute services
 - o 13% is primary care and community services
- Building energy use is 18% of the NHS England carbon footprint of which:
 - o 73% is acute services of which:
 - o 51% electricity
 - o 45% gas
- Business services is 9% of the NHS England carbon footprint of which:
 - o 50% is acute services
 - o 34% is primary care and community services

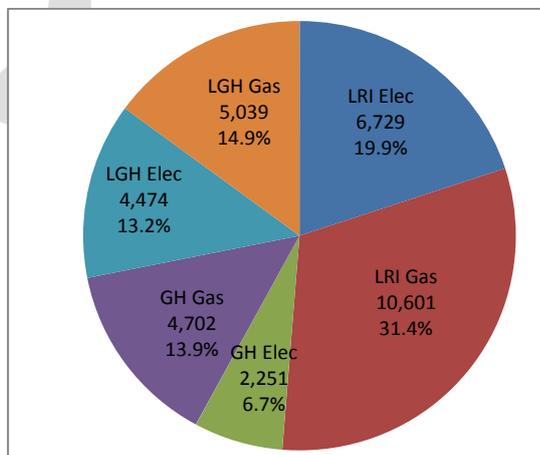
Value At Stake (Money)



Tonnes of CO₂ Emitted



CO₂ (Tonnes) Emissions by Site 2016-17



The 'CO₂ (Tonnes) Emissions by Site' graph indicates the current breakdown of the emissions within UHL, from the use of electricity and natural gas, clearly indicating where the largest opportunities can be pursued.

This SDMP has the support and encouragement of all Trust Board members and their valued and ongoing commitment will be essential as we seek to secure the reductions outlined within this document.

2.1 Projects and Actions previously taken to Achieve the current emissions levels:

- Replacement of the first generation the Combined Heat and Power (CHP) units LRI & GH.
- Various upgrades to lighting (LED), thermal insulation, variable speed drives VSD.
- Procurement of Energy Efficient equipment and plant.
- Increased Staff awareness of Climate Change has improved general housekeeping.
- Review of the Building Management System – Changed settings.
- Replacement of Calorifier with Plate Heat exchangers.

3. TARGETS

By 2020 the trust has been requested to reduce its carbon emissions by 34% on a 1990 baseline and by 2050 this extends to 80%. In the absence of an accurate baseline for the 1990 the NHS has recommended that organisations use the baseline year of 2013 with a 28% reduction.

In 2013 the UHL's baseline was **41,334** tonnes of CO₂. This has been slowly reduced to **36,138** tonnes in 2015-16. It is envisaged that confirmation of the 2016-17 emissions data will show a reduction to 34,000 tCO₂ representing an overall reduction of 17.7% from baseline position. To achieve the 28% overall target will require a further 10.3% in the remaining 3 years up to 2020. This is mainly due to a £2.16 Million investment in the installation of 2 new CHP units. These new units have given a **10,065** tCO₂ saving to date. The table below represents the reductions already achieved and our predictions for the next 3 years in terms of direct and indirect Electricity and natural gas related usage, cost and emissions. This data has been applied to the "Business As Usual" analysis with the upper line represents the "do-nothing" approach and will rise broadly with the projection. The lower line indicates the benefit of introducing the plan in its entirety as linked to the revised capital investment and current projects that are proposed to 2022.

Description	Gas	Grid Electricity	Totals	Cost	CO2 Emissions	CO2 Emissions
Year	Usage (KWh)	Usage (KWh)	(KWh)	Costs (£)	(Tonnes)	(CRC Cost)
2006/07	116,873,611	29,357,222	146,230,833	£5,252,319	37,531	N/A
2007/08	99,831,667	30,681,111	130,512,778	£4,403,428	35,090	N/A
2008/09	109,781,944	33,822,222	143,604,167	£7,320,137	38,633	N/A
2009/10	93,697,272	36,426,819	130,124,091	£5,136,734	36,910	N/A
2010/11	96,694,476	39,489,130	136,183,606	£5,282,765	39,236	N/A
2011/12	85,673,210	42,535,080	128,208,289	£6,479,603	38,881	£376,571
2012/13	86,601,762	46,390,022	132,991,784	£7,223,638	41,334	£404,539
2013/14	83,164,032	48,522,097	131,686,129	£7,995,022	40,724	£400,777
2014/15	92,086,201	38,205,678	130,291,879	£7,072,683	36,950	£281,979
2015/16	101,496,587	32,832,008	134,328,594	£6,390,731	36,138	£291,598
2016/17	110,763,363	30,124,841	140,888,204	£5,512,227	33,795	£278,269
2017/18 4%	106,332,828	28,919,847	135,252,676	TBA	32,444	TBA
2018/19 4%	102,079,515	27,763,053	129,842,569	TBA	31,146	TBA
2019/20 4%	97,996,334	26,652,531	124,648,866	TBA	29,900	TBA
Annual Change	-9,266,776	2,707,167	-6,559,609	£878,504	2,342	£13,329
% age change	-9.13%	8.25%	-4.88%	13.75%	6.48%	4.57%
2012/13 Change	-24,161,601	16,265,181	-7,896,420	£1,711,411	7,539	N/A
% age change	-28%	35%	-6%	24%	18%	N/A

4. BUSINESS AS USUAL (BAU)

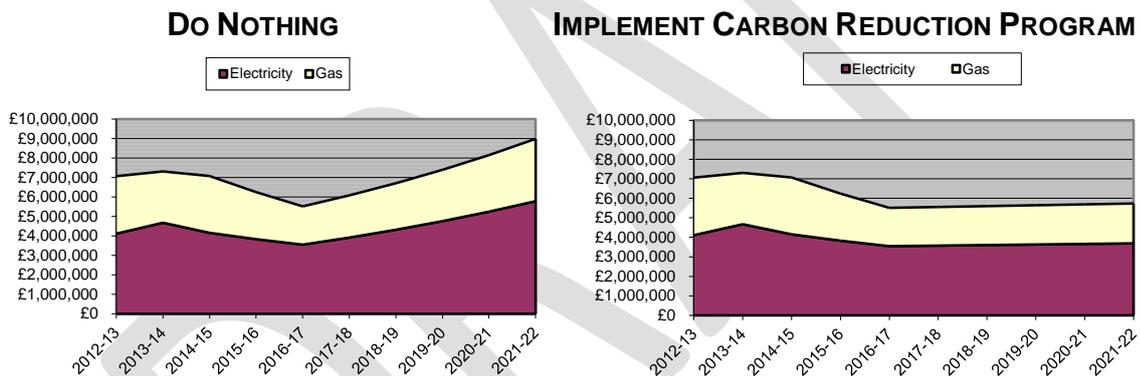
Projected CO₂ emissions for the BAU scenario have been calculated for the data noted within the Targets up to 2022, and the projected effect of adopting the SDMP. The detail below shows the benefits UHL will gain when this programme is implemented.

The BAU scenario assumes that we take no further action to limit an upward trend of energy consumption and carbon emissions. In effect this represents the outcome of ignoring the climate change evidence and the improvements which bring about the savings & cost avoidance. Industry standard factors have been applied to allow realistic forecasting of energy consumption and cost trends.

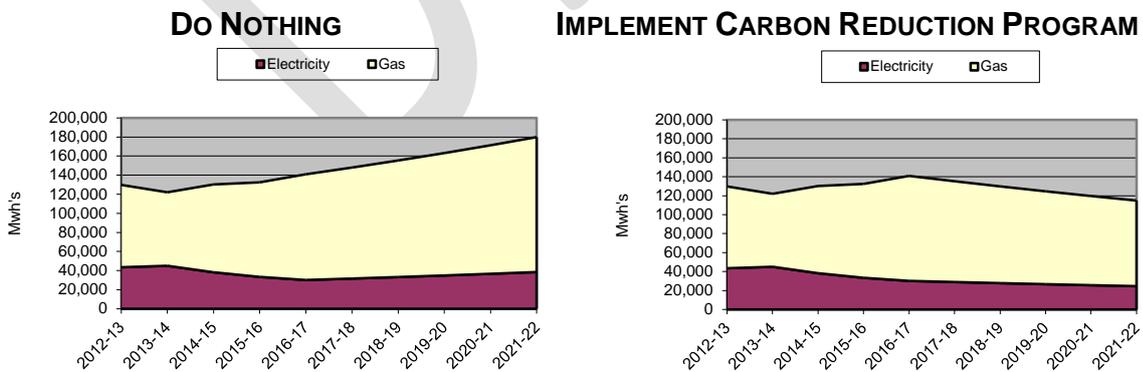
The data has been calculated with the assumption that energy consumption would naturally be increasing by 5% per annum, with a 5% increase in cost and a 4% year on year target reduction. This in effect amounts to an increased overall reduction of 9% in consumption and would still be subject to a 5% year on year increase in unit cost.

The graphs below represent the possible saving to 2020 and then extended to 2022 to cover the 5 year SDMP.. The left-hand set of graphs represents the “do-nothing” approach and will increase as to accommodate the Estate and service requirements without any counter measure to restrict its increase. The right-hand set of graphs indicates the benefit of introducing the plan in its entirety and an assumption that a revised capital investment program with the required funds are approved for and the current and proposed projects to 2022.

Breakdown of Costs



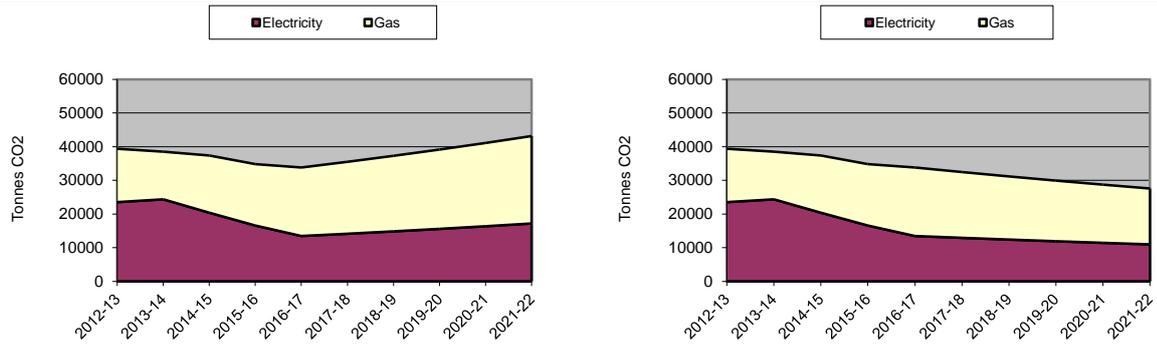
Breakdown of Consumption



Breakdown of CO₂ Emissions

Do NOTHING

IMPLEMENT CARBON REDUCTION PROGRAM



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5. THE UHL WAY FORWARD

The Chief Executive of the University Hospitals of Leicester NHS Trust (Glenfield Hospital, Leicester General Hospital and the Leicester Royal Infirmary), has endorsed the principal and strategy proposed within the SDMP. This has committed the Trust to reduce the amount of emission to air, land or sea. This is to include emissions produced directly or indirectly by the Trust's activities, whilst maintaining a safe and stable environment, for the provision of healthcare within Leicestershire.

The environmental impact of the Trust shall be minimised by detailed consideration of the most environmentally efficient and cost effective methods for the conservation, purchase, generation and use of energy resources, equipment and consumables. This process shall compliment and ensure the delivery of the SDMP.

OUR VISION:

“In pursuing the objectives of this strategy the University Hospitals of Leicester NHS Trust will be a leader in Carbon Management within the public service arena and across the Leicestershire region as a whole.”

The UHL has a pivotal role in providing the optimum acute healthcare across Leicestershire and Rutland, and given our stated ambitions on the environmental agenda, it is our aim to be a leader in the public service arena by adopting and managing this challenging opportunity. This presents the prospect of not only enhancing the wellbeing of the local population but also improving the associated environmental impact in providing our services.

UHL views its present Estates and Facilities reconfiguration plans as an opportunity to secure reductions in carbon emissions in the near future and also influence the asset procurement programme by introducing carbon as a key factor when considering priorities.

Although the opportunities to make continued savings are increasingly demanding, UHL will seek to set new targets and pursue a carbon efficient agenda.

5.1 Timescale of Strategy and Plan

The SDMP identifies the measures which UHL will take to meet our emissions target and also introduces the timeframe within which these objectives will be met. Prior to this plan being adopted, UHL had already initiated a number of measures to reduce carbon emissions. This plan will define the management of our carbon emissions and sustainable approach to business activity which originally started in 2005. Going forward and as a recommendation from the SDU UHL's baseline date will be 2013, with the initial targets set in 2017 to 2020 and extended to 2022, this will be reviewed annually to ensure that fresh opportunities are not missed and ongoing issues are addressed.

5.2 Past Actions and Achievements

UHL has always taken its environmental obligations seriously, and prior to the implementation of this SDMP work was undertaken with the Carbon Trust with a series of assessments which identified carbon reduction opportunities within the Trust. These actions maintained a stable emission level as activity has increased and the additional installation of new power hungry but more accurate and defined diagnostic equipment.

Significant progress has been made in the last 11 years across the Trust to ensure a sustainable approach to our activity is considered which have included energy and utilities, waste, transport, procurement and local engagement with the overarching desire to deliver a more sustainable business and facility for the patients, staff and visitors.

6. WORKSTREAMS

6.1 CARBON HOTSPOTS A (Energy, heating, lighting, ventilation, water)

Within UHL, utilities directly consumed comprise electricity, gas, oil and water. Each of these areas are constantly being reviewed for best value for supply and cost, utilising local and national networks, in which the UHL takes a prominent part to influence National Procurement processes for energy contracts.

Significant turbulence has been experienced in the energy market over the past years, and a constant focus has also been maintained on usage, with savings being made incrementally with good housekeeping and investment opportunities to hold the emissions as low as possible.

Data is collected annually from the NHS in England via Estates Return Information Collection (ERIC) submissions; these have consistently indicated that the UHL is in the **"GOOD"** category for energy use being an average of 17,501 Kwh/100m³ or 63.00 GJ/100m³.

The introduction of HTM 07-02 EnCO₂de, the EUETS, CRCs DECs, AC inspection and PAMs within the NHS has formalised the energy standards expected for buildings and service equipment installed. This document is now the de facto energy efficiency guidance relating to the NHS. As such, the KPI's and practices highlighted are being promoted within the UHL in order to improve the performance of healthcare buildings.

6.1.1 Utility Energy Use, Efficiencies and Carbon Hotspots

Immediate actions:

1. Establish a Board-approved Sustainable Development Management Plan (SDMP);
2. Sign up to the NHS Good Corporate Citizenship Assessment Model;
3. Monitor, review and report on carbon emissions;
4. Actively raise carbon awareness at every level of the organization.

Monitoring and targeting techniques will be expanded across the UHL to enable energy usage to be mapped and initiatives prioritised for maximum benefits.

Procurement from renewable energy sources will be pursued, using the scale of purchase by UHL to influence investment opportunities.

Where feasible, UHL will operate renewable energy activities on site to obtain direct benefits, and as demonstration opportunities for staff and public.

6.2 CARBON HOTSPOTS B (Anaesthetic Gases, Pharmaceuticals, Medical Devices)

The use of anaesthetic gases will be monitored by the appropriately trained “authorised person” with the assistance of the “competent person”. They will liaise with the relevant clinical leads that have the operational control and use of the gases to ensure they are used appropriately to minimise their use and therefore reduce the effect of any emissions. This will be applied as to have no detrimental effect to the patients’ need for clinical care. This will be element of the SDMP will be developed and will create its own individual work stream.

Globally, pharmaceutical and medical device products contribute a large proportion of healthcare GHG emissions. Evidence for this comes from the National Health Service (NHS) Sustainable Development Unit (SDU) which, in 2009, carried out its first top-down carbon foot printing exercise. This concluded that procurement of goods and services from the NHS’s supply chain accounted for 65% of the total GHG emissions of NHS England. Of these procurement-related emissions, approaching half were attributable to pharmaceutical products and medical devices.

The Lead Pharmacist will play a key role in ensuring that Pharmaceuticals are resources and managed to provide the best value for money across the whole of UHL. This will be element of the SDMP will be developed and will create its own individual work stream.

A pharmaceutical product is a substance used for medicinal purposes, for the purpose of medical diagnosis, cure, treatment or disease prevention. Examples include tablets and dry powder, creams and ointments, patches, administering devices, etc.

The production of pharmaceutical products can be broadly split into two major stages: API manufacture, and conversion with a suitable delivery mechanism for administration to patients. Each is covered in separate ‘modules’ of guidance, broken down according to the following.

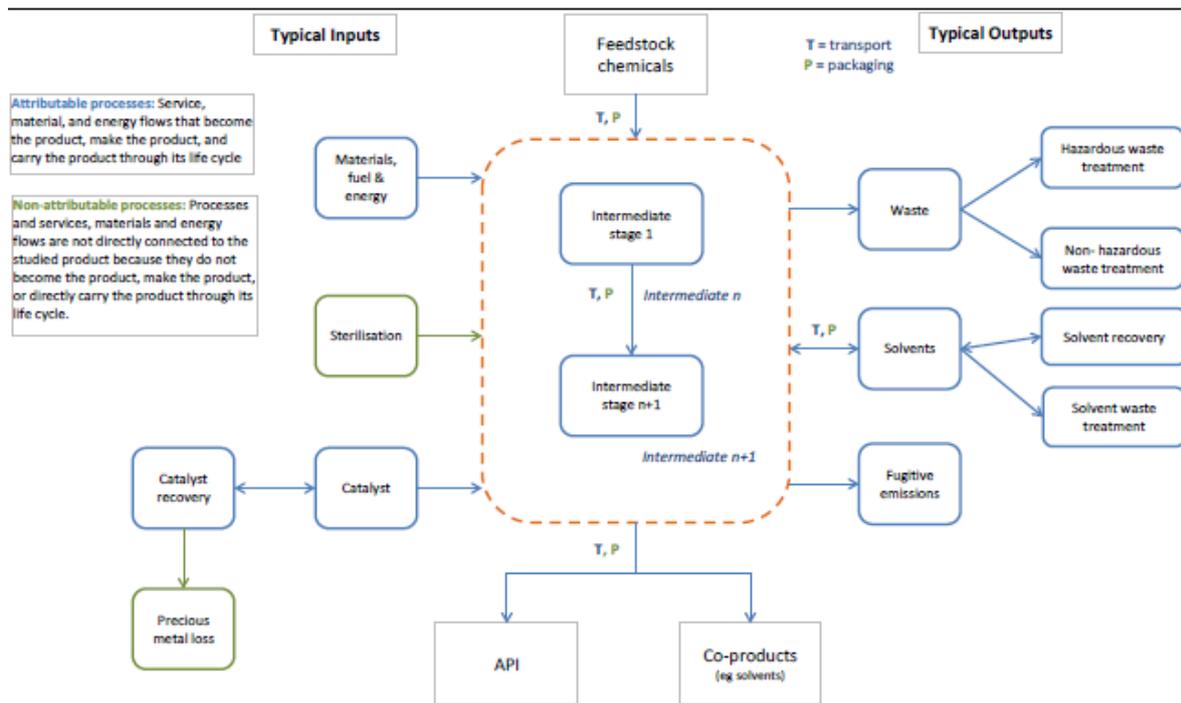
Active pharmaceutical ingredient (API) manufacture including;

synthetic organic chemical batch-processes that start from commercially available commodity and specialty chemicals; fermentation by use of microorganisms or cell cultures; egg-based cultivation for vaccine incubation; production of conjugate vaccines; plant-based extraction of chemicals for processing; and extraction of materials from animal and human-derived sources. Delivery mechanisms including;

- **solid dose forms** such as tablets or a dry powder for use in a further delivery mechanism;
- **liquid dose forms** and suspensions for ingestion or use in other delivery mechanisms;
- **creams and ointments** for transferring APIs onto the skin;
- **patches** for API administration in doses through the skin;
- **gases** for inhalation;
- **administering devices** such as metered dose inhalers (MDI), dry powder inhalers, auto-injectors and nebulisers; and
- **packaging** such as vials, ampules and bags and packaging to protect and store the products before use.

An example of the type of process map and attributable/non-attributable process inclusions and exclusions that are defined in the guidance is show below for synthetic organic chemicals.

Pharmaceutical Product Example Process Map (Synthetic Organic Chemicals)



Pharmaceutical Product Example Inclusions and Exclusions (Synthetic Organic Chemicals)

<p><u>Include these attributable processes:</u></p> <ul style="list-style-type: none"> <u>Material and chemical inputs</u> <u>Material and chemical transport</u> <u>Energy/fuel generation and consumption</u> <u>Waste disposal</u> <u>Solvent manufacture, use and disposal</u> <u>Catalyst manufacture, use and disposal</u> <u>Solvent recovery and incineration</u> <u>Process emissions from synthesis</u> 	<p><u>Include these non-attributable processes:</u></p> <ul style="list-style-type: none"> <u>Chemicals used for cleaning</u> <u>Sterilisation</u> <u>Refrigerant leakage associated with product manufacturing</u>
<p><u>Exclude these attributable and non-attributable processes:</u></p> <ul style="list-style-type: none"> <u>Packaging of material and chemical inputs</u> <u>Disposal of input packaging (eg IBCs, drums, pallets, etc)</u> <u>Production and disposal of consumables (eg gloves and protective clothing, filters, cartridges, etc)</u> 	

6.2.1 Medical devices

The **Head of Medical Physics** will play a key role in ensuring that Medical devices are resources and managed to provide the best value for money across the whole of UHL. This will be element of the SDMP will be developed and will create its own individual work stream.

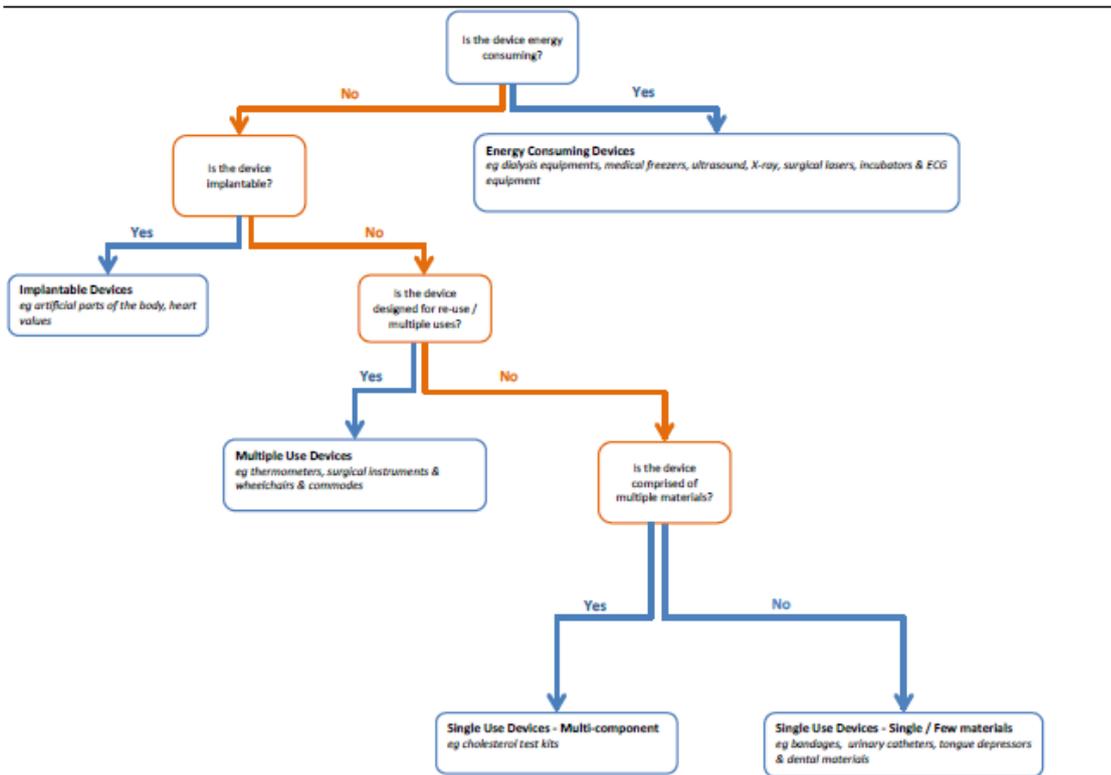
A **medical device** is a product intended to be used for medical diagnosis, cure, treatment or disease prevention, but which does not achieve its principal intended action in, or on, the human body by pharmacological, immunological or metabolic means. Examples include instruments that may be active, passive, implantable, etc and can be used in such applications as the prevention, diagnosis or treatment of disease.

Similar to pharmaceutical products, modular guidance is provided for medical devices. These include the same categories of information within each module and the modules considered include:

- Passive, Single Use Devices with Multiple Components/Materials;
- Passive, Single Use Devices with Few or Single Components/Materials;
- Passive, Reusable Devices;
- Implantable Devices; and
- Energy Consuming Devices.

A decision tree for considering the relevant medical device modules is shown below.

Decision Tree for Assessing Medical Products



Include these attributable processes:

- Production, processing and transport of raw materials, including batteries and packaging materials
- Manufacture, sterilisation, packing, storage and distribution of the medical device product
- Production and distribution of energy, water and materials consumed by the medical device during operation
- Production of spare parts/materials, and energy required for refurbishment and repair of devices
- Waste management activities at end-of-life, including transportation

Include these non-attributable processes:

- Production and distribution of energy/water/chemicals for sterilisation of reusable devices
- Production and distribution of consumables required for the operation of a medical device for its intended purpose
- Sterilisation and cleaning chemicals
- Refrigerant leakage associated with product manufacturing

Exclude these attributable and non-attributable processes:

- Transport of staff involved in delivery, maintenance, refurbishment and repair
- Transport of patients to receive treatment
- General hospital/clinic/home infrastructure to support use of the medical device
- Software to run medical devices
- Ancillary products and equipment, eg protective clothing, etc. – with the exception of energy used for sterilisation (before distribution or during use)

6.3 CARBON HOTSPOTS C (Travel and Transport)

6.3.1 Transport

The Trust encompasses three sites and a large degree of travel between the sites is necessary. In an initiative to reduce travel to and between the sites in 2001/02 a Green Travel Plan was written and as part of this plan a Travelwise Manager was appointed in 2003/04. The Travel Plan was updated in 2013.

The 2013 Travel Plan acknowledged the work completed so far and identified new goals.

Since the instigation of the plan a number of schemes have been implemented:

- Encouragement of bus travel (continued liaison with the 2 councils including development of the Park and Ride services);
- Re-provision of bike sheds as and when capital projects encroach on the current facilities (cycle and motorcycle);
- Hospital Hopper bus service (continued provision, now approaching its 11th year);
- Car parking permits have been overhauled, all staff requested to reapply and new criteria put in place;
- Liaison with volunteer driver co-ordinator.

The 2013 Travel Plan has been produced in order to minimise the impact of travel associated with the Trust. It sets out the Trust's strategy for reducing dependency on the private car while facilitating and encouraging travel by healthier and more sustainable modes.

The Travel Plan is intended to directly benefit patients, visitors and staff of the Trust. By making it easier and more attractive to leave the car at home, the Travel Plan allows greater freedom to take advantage of healthier and more environmentally friendly alternatives. In addition, by reducing the traffic generated by the Trust sites, the Travel Plan can have a positive impact on the local road network.

The Trust recognises that alternatives to car travel are not a viable option for all users. Therefore, in tandem with promoting alternative modes of travel, we aim to ensure that appropriate and sufficient car park provision is provided for those who need it.

One of the biggest contributors to the success of the Travel Plan so far has been the UHL shuttle bus. The Hospital Hopper bus initiative, when it was established in 2005/06, was anticipated to reach 5,000 passenger journeys per week at best. In 2006/07 it achieved 7,500 per week, the bus now transports between 11,000 and 12,000 passengers a week.

The 2013 Travel Plan builds upon a previous Travel Plan first produced in 2001, which set out targets of reducing car use to our three sites, the 2001 targets were achieved. The new Travel Plan sets out new targets and an action plan for achieving the new targets over the short, medium, and long-term.

6.3.2 Transport Emissions

The work undertaken on transport and site access issues has highlighted the opportunities to change behavioural practices, and to demonstrate that car use can be supplemented or replaced with alternative methods of transport.

The Trust will continue to expand on the present initiatives, along with the promotion of "greener choices" for personal transport purchased through the Trust's salary sacrifice scheme.

Transport is a major indirect contributor to carbon emissions associated with the UHL's activities, and an essential part of the plan will highlight this message. The calculation of Transport emissions for the base line has proven problematic, as the constituent parts, internal transport, lease car users, and business mileage undertaken in private vehicles has proven difficult to clearly identify. But on going work will continue to establish sound methodologies during the next few years.

Also staff commuting to and from work has been specifically excluded from the baseline at this time, as data collection and analysis for this will be encompassed within the overall transport work stream, with the aim of promoting initiatives to encourage greater use of public transport as a means of limiting the use of private vehicles.

6.4 CARBON HOTSPOTS D (Clinical and Domestic Waste Management)

The Glenfield Hospital site has won national environmental awards for recycling as far back as the 1990's. However, the other two sites have less capacity for waste storage and segregation, although there is always a strong desire among staff to ensure waste is recycled. Currently, the Glenfield Hospital recycles all waste streams, which is in line with the other two acute hospitals, be it domestic, clinical or confidential with no waste being sent to landfill. Aside from regular waste committee meetings, waste contract meetings and audits, the complete recycling of all waste is due to the diligent Trust staff working in conjunction with proactive specialist waste contractors.

The Trust has also witnessed a steady reduction in the levels of waste being generated over recent years although for financial year 2016-17 it is showing a slight rise, as the annual ERIC return figures indicate below:

Financial Year	Tonnes
2012-13	5388
2013-14	4530
2014-15	3935
2015-16	3624
2016-17	4124

6.4.1 Waste Streams

Currently Trust wide, some 4124 tonnes of domestic, clinical and confidential waste are disposed per annum. It is estimated that some 45% of clinical waste is currently not of a clinical classification and could be deemed as domestic waste, but it is difficult in public areas to always guarantee correct segregation. Therefore, Trust Staff play a major part in recycling where ever possible with dry mixed waste being collected separately to general waste, although both waste streams are recycled.

For clinical waste, segregation is now a legal requirement and the waste generated is annually audited at all three acute sites by an external specialist, this helps ensure that sharps, medicines and alternative treatment waste streams etc. are always separated, and again the latter is heat treated and then recycled as a refuse derived fuel. Again, none of the Trust's clinical waste is sent to landfill sites.

The Trust also works, through its Procurement arm, to minimise the packaging waste which enters the Trust, whilst ensuring the maximum levels of recyclable products are purchased.

6.4.2 Waste Disposal Arrangements Including Recycling

An on-going review of waste generation by the Trust is being undertaken, to establish its creation, handling requirements, and disposal routes, with the aim to not only remain compliant with Legislation, but also to increase the percentage of recyclable products procured.

The Trust also supports alternative disposal methods to land fill and incineration, where they can demonstrate carbon emission benefits.

6.5 COMMISSIONING & PROCUREMENT (Sustainable finance & food, Commissioning a sustainable development)

6.5.1 The Principles of Sustainable Development within Procurement

The principles of sustainable development within procurement are based on Corporate Social Responsibility (CSR) which is a balance of social, economic and environmental considerations, ensuring that purchasing decisions are based not only on receiving whole life value for money, but also that they ensure fairness, encourage diversity, act ethically and reduce the impact on the environment. Therefore procurement activity is underpinned by the following key principles;

6.5.2 Environmental

Seeking to minimise any negative environmental impacts of goods and services purchased, across their life cycle from raw material extraction to end of life. Relevant environmental issues include:

- Energy, Carbon, methane and other emissions to air
- Water and emissions to water
- Resource and raw materials, Waste
- Hazardous substances, Local environment, Biodiversity

6.5.3 Social

Managing and monitoring supply chains to ensure that fair contract prices and terms are applied and ethical, human rights and employment standards are met at all times, while delivering other social benefits where available. Relevant social issues include:

- Health, Education
- Employment
- Community
- Fair and Ethical Trade
- Equality and Diversity

The Trust is committed to the principles contained in the Ethical Procurement for Health Workbook (http://www.ethicaltrade.org/sites/default/files/resources/EPH_Workbook.pdf), which helps procurers in the health and social care sector include consideration of labour standards throughout the procurement and market engagement processes.

6.5.4 Modern Slavery Act (MSA)

We have a legal requirement to ensure that we comply with the Modern Slavery Act. All procurement exercises should consider the act with a view to minimising the risk of modern slavery in our supply chains. A number of initiatives are taking place at a national level in the NHS (e.g. standard tender documents, prequalification questionnaire (PQQ) and amendments to the NHS Terms and Conditions).

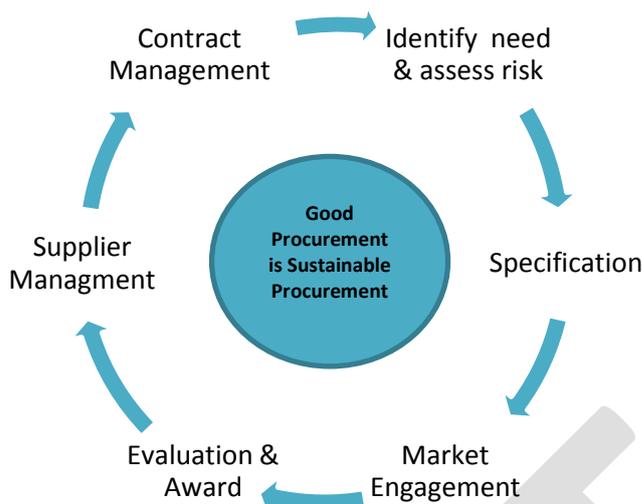
6.5.5 Economic

The economic principle relates not only to obtaining value for money from our contracts, across the whole life of the product or service, but also ensuring as far as is possible under relevant procurement law, that local businesses, particularly Small and Medium sized Enterprises (SME's) can benefit from our procurement processes where it is feasible for them to do so.

Through tackling all three principles of sustainable procurement in the procurement process, we aim to embed these so that they eventually become an integral part of all relevant contracts, at pre-tender, tender and post-contract award stages (including monitoring and evaluation), through to the end of the life of the contract and including any disposal of equipment. As the diagram below indicates, embedding sustainable procurement requires consideration at relevant stages of the procurement process.

To ensure both sustainability risks and opportunities are managed in procurement we need to ensure sustainability is:

- Addressed in the **contract specification**
- Managed by supplier selection
- Included in requirements for supplier proposals for evaluation (**bid evaluation**)
- Managed by Key performance indicators (KPIs) and Service level agreements (SLAs) post **contract award** (supplier and contract management)



Embedding sustainability into the procurement process therefore will deliver a range of benefits. Some of which have already been demonstrated through, for example: flat screen versus CRT monitors; instigating the correct authorisation policy for comfort cooling; and ensuring the purchase of energy efficient light fittings and tubes.

6.5.6 Procurement of Capital and Revenue Projects

Life Cycle Costing for capital and revenue projects will be implemented at all levels of procurement, not only on major projects. Over the term of this plan, we intend that this will have become a crucial part of influencing the efficiency of equipment and buildings and the related cost/carbon impact. While the concept of life cycle costing is generally accepted as a common-sense approach to adopt, these are integrated measures into the purchasing mechanisms for both capital and revenue items.

Procurement in its various forms greatly influences the efficiency of the organisation in its pursuit of Carbon Management and have in place 3 year delivery plan which will address the following aspects;

1. Self-assessment – complete 17/18 for level 1 for Procurement and Supplies team
2. Training - In 17/18 we will train and include Sustainable Procurement awareness as part of the Staff Induction Programme
3. Policy, Strategy and Communication – is shared with staff and key suppliers
4. Procurement Process – Ensure that our Key contracts start to include general sustainability criteria and stock levels are managed effectively
5. Partnership and Engaging Suppliers – In 18/19 Undertake key supplier spend analysis and high sustainability impact suppliers are identified.

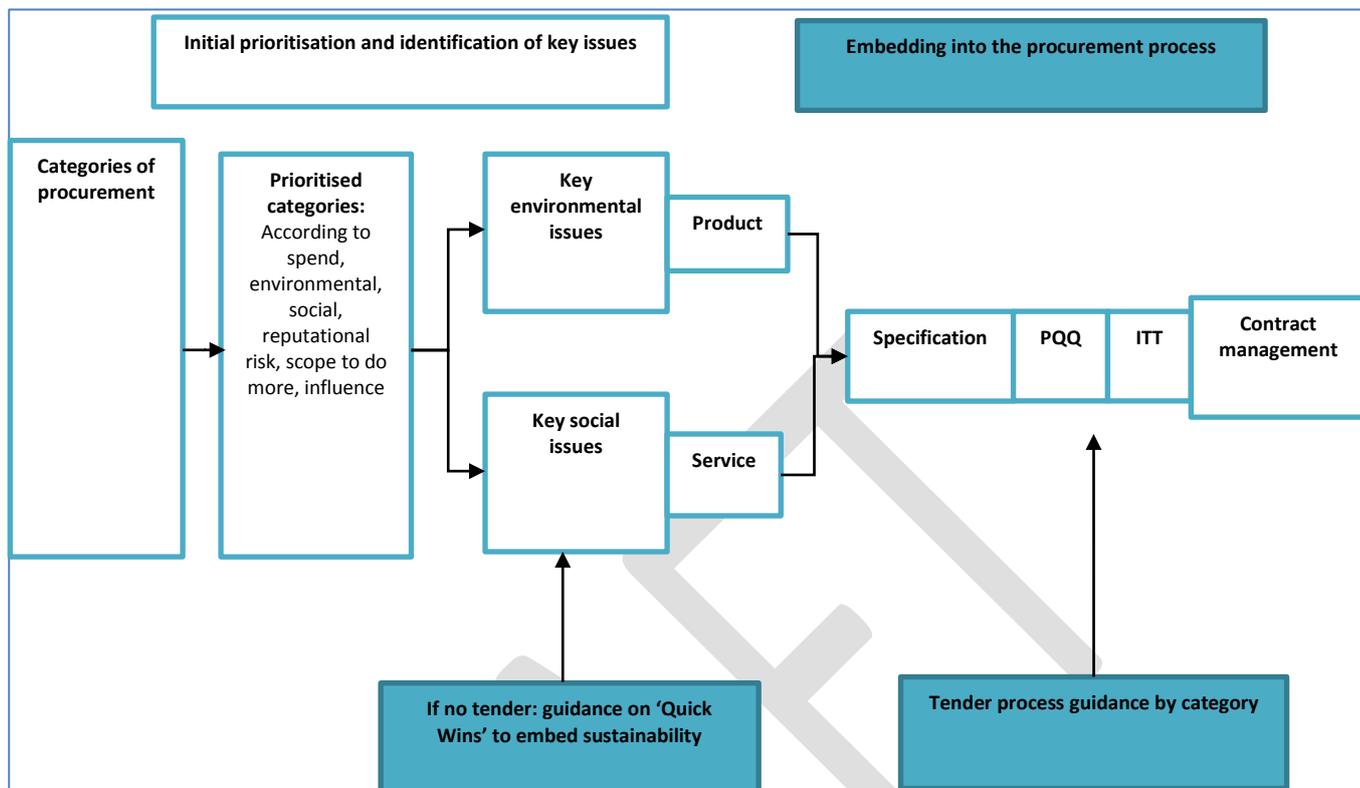
Over the period of the plan, the Trust will see the carbon reduction benefits as the new paperless finance and procurement system is rolled out. In addition, the system will allow more systematic monitoring and contract management ensuring correct specifications and processes to be achieved, which will have a knock-on effect of a reduction in waste and low carbon activity.

As industry moves toward production of more efficient appliances, the trend would seem to be that rated equipment becomes the mainstream product. However, choice is often orientated towards the purchase price and not always the whole life cycle cost of the item.

National procurement initiatives are seeking to ensure value for money due to economy of scale but this must be matched by guarantees that life cycle efficiency is embedded.

Procurement and efficient completion of capital projects is crucial to the positive outcome of this Carbon Management Plan. Adherence to Health Technical Memoranda such as EnCO₂de will ensure that relevant standards are met. The impact of buildings not performing as intended will be detrimental to the overall carbon footprint of University Hospitals of Leicester NHS Trust. Many projects within England have been successful in meeting, and indeed exceeding, the standards set by EnCO₂de.

Trust Sustainable Procurement Approach Flowchart



6.5.7 Implementation Plan Financing

The potential financial benefits accruing to University Hospitals of Leicester NHS Trust from the implementation of the SDMP are significant. Energy costs are escalating higher in a volatile manner, which has a direct and indirect impact on the UHL, and Government policy is imposing financial sanctions linked to carbon emissions, predicated on year on year reductions being made. Do nothing is therefore not a tenable position, so investments will be required which need to be incremental, effective, and sensible within the overall UHL Strategic Plan.

6.5.8 Funding

The opportunities will be taken to bid against National funding sources for carbon reduction projects, identify UHL funding on an "invest to save" basis, and look for joint venture initiatives in emerging technologies.

6.5.9 Non-Financial Resources

There is a need to ensure the long term commitment of a range of staff who will act as "carbon champions" which is a key to the success of this project. Their input is difficult to quantify in financial terms, but essential nevertheless. These resources will make a valuable contribution to the overall effectiveness of the strategy, and will need nurturing and leadership.

6.5.10 External Support

Our organisation has benefited from involvement of the Carbon Trust support staff, over years, which has allowed us access to a resource which would otherwise have been unavailable. Reports from these exercises have formed the basis for past and present investment and will continue to be a source of reference as to the viability and validity of energy saving methods.

6.5.11 Food

UHL has always applied high standards to the purchasing and delivery of all food to patients, staff and visitors with the following points high on the agenda.

- All of our food is purchased through NHS Supply Chain approved suppliers.

- Our Menus are agreed by our Dieticians, to ensure they meet the essential and the appropriate Nutrition Content for our patients.
- We review our Menus 6 monthly as suppliers change and delist meals to reflect the seasons.
- We provide extensive menus that incorporate, Specialist Diets such as Low Residue, Gluten Free, Vegan, Vegetarian, Children's / Baby foods and arrange of ethnic meals.
- We are actively working towards compliance with the 10 key Characteristics of Good Nutritional Care.
- Due to the high volumes we are unable to source all our food locally, however Procurement are proactively reviewing all options regularly as one of their objectives

Retail outlets –

Are nearly fully Cquin compliant providing Healthy food for NHS staff, Patient and Visitors.
We have a range of locally sourced Sandwiches and Snacks available.

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6.6 LEADERSHIP, ENGAGEMENT & DEVELOPMENT A (Organisational and Workforce Development)

6.6.1 Motivation

UHL is the organisation responsible for delivering the majority of the acute health services to the people of Leicestershire, and Rutland, and as such UHL is adapting services to meet the future health needs of the local population. Drivers for change include an ageing population, the growth in long-term conditions such as diabetes, improving access to treatment, advances in medical and surgical practice, and a widening gap in life expectancy between the affluent and the disadvantaged.

UHL aims to support the initiatives which increase the emphasis on improving health through strengthening local preventative services, with more support for self-care, more intensive case management for people with serious long-term conditions, and more capacity for diagnosis and treatment locally. This will enable acute hospitals to focus on providing complex care, improving access and ensuring the most effective use of skills within the health service. In addressing the current and future health and wellbeing needs of the population of Leicestershire, there is a clear expectation that the patient environment and overall patient experience will meet appropriate standards and ensure patient safety at all times. Such services should be high quality, efficient and effective, and it is our intention to provide modern infrastructure to support clinical services, utilising facilities which have minimum impact on the environment.

6.6.2 Employment and Skills

Employment is one of the key determinants of health, so investing in recruiting, developing and retaining local people will not only help meet demands for staff in the future, but will also contribute to improving population health – and reduce travel related environmental damage. The UHL will get involved in basic training for local people allowing them to take steps back into employment or to be more fulfilled in their NHS jobs, allowing local people to come to hospitals as workers rather than as patients.

6.6.3 Communications

Employing approximately 12,000 staff, UHL has a major task to inform and encourage its employees to be carbon efficient. This document among others will give guidance and direction as to how this will be achieved.

A regular in-house newsletter will be circulated in an environmentally friendly manner, seeking to inform the staff of their responsibilities and achievements. It is accepted that this is effective to a point but requires to be supplemented by direct contact on a day to day basis.

We will therefore introduce a network of Carbon / Environmental Champions with the intention that it will span the entire organisation with the inclusion of staff at all levels. These staff will receive training and will be the local “eyes and ears and conscience” with regard to energy efficiency and carbon outputs. Embedded in their own departments these staff will effectively be in a position to promote in their own area the message of efficiency and the need to be less wasteful of costly resources.

On an on-going basis there will be a programme of awareness sessions available to staff generally and this will allow further contact between Environmental Managers and staff throughout wards and departments.

As new staff are inducted, efforts will be made to address energy awareness issues and discussions initiated to look at integration with the present induction format.

Communication to and from the various staff groups and individuals will be achieved by:

- Minutes from meetings of the Energy & Sustainability Group will be widely circulated and published.
- Awareness campaign sessions will allow Environmental Management to inform and encourage staff locally to be involved and instructed as to the opportunities available to them.
- Submission of articles in UHL Team Brief, staff information bulletins, staff newspaper, global email, etc.
- Development of a web and intranet site with key information, events, project information, etc. relating to the SDMP.
- Carbon Champions will receive reports to inform of local improvements and conformance with targets.
- Contribution to staff induction.

The UHL SDMP has the full support of Trust Board members and senior management and the progress of implementation will be comprehensively reported to these Groups.

The Energy & Sustainability Group (ESG) will be formed to meet on a bi-monthly basis and the status of the plan will be reported regularly at these meetings.

The UHL Estates Capital Team and the Capital Monitoring & Investment Committee which oversees the Capital Programme will also be kept informed, both to report on the success of current capital projects and also to ensure ongoing investments and commitment to the SDMP.

6.6.4 Carbon / Environmental Champions and Departmental Groups

The Champions will engage in an informal manner with the wider staff body. The Champions will be kept informed by personal staff meetings, email, memos etc. The Champions will be recruited via Ask the Boss questions, the various workshops and any person showing an interest or that have contacted the Facilities Directorate relating to this issue. In addition to the work done through the Champion network, awareness sessions will provide an understanding of good housekeeping and the standards expected. These sessions will be provided at various work locations across the Trust and will be tailored to meet the needs of the various staff groups.

6.6.5 Good Corporate Citizenship

The NHS Good Corporate Citizenship Assessment Model (GCC) is a qualitative self-assessment toolkit designed to help NHS organisations think how they can contribute to sustainable development. It is a requirement of the CRS that all NHS sign up to this framework, which can be used to consider a broader range of sustainability issues than those contributing to the Trust's CO₂ emissions.

The model assesses performance across 8 areas: Travel, Procurement, Facilities Management, Workforce, Community Engagement, Buildings, Adaptation (to Climate Change) & Models of Care. Members of the ESG will conducted an initial scoring exercise and this will generated a GCC baseline and provided the basis for the action plan contained in this SDMP. The Trust will commence to complete the initial baseline GCC data and review the scores and amend and update the SDMP as necessary.

6.7 LEADERSHIP, ENGAGEMENT & DEVELOPMENT B (Governance)

6.7.1 Main Roles and Responsibilities

In order to ensure timely and satisfactory completion of this project, the key personnel will be nominated to be included within the initial "Energy & Sustainability Group".

There are close links between the Project Lead & the Project co-ordinator and this reflects the normal day to day working arrangements. Meeting on a monthly basis, both Project Lead and Project Sponsor will work closely with the Core Carbon Management Group.

The Energy & Sustainability Group will meet bi monthly; minutes will be kept of their discussions which will form the basis of a report which will be circulated both within the group and to the wider organisation.

Identified below, these individuals are key to the sustained success and implementation of the SDMP. Each group or staff member will make an impact in different ways and the list is neither exhaustive nor set out in terms of importance.

6.7.2 Key Personnel

<i>Role in SDMP</i>	<i>Name and position in the Trust</i>
Sponsor	Darryn Kerr - Director of Facilities & Facilities
Project Leader	Mike Webster – Head of Estates and Property
Project co-ordinator	Martin Owen - Senior Specialist Engineer
Core Carbon Management Group	Mark Evans – Energy, Waste & Sustainability Manager
	Steve Farmer - Statutory Compliance Manager
	Nigel Bond, Head of Capital Projects
	Andy Martin - Regional Estates Manager LRI
	Steve King - Regional Estates Manager GH
	Pete Pierce - Regional Estates Manager LGH
	Ruth Ward, Travelwise Manager
	Jeanette Green, Head of Finance, Estates & Facilities
	Craig Waistell, Technical Performance & Quality Assurance Officer
	Tony Roost, Category Specialist
	TBA, Clinical Representatives
	TBA, Communications

6.7.3 Risks and Issues Management

A risk and issue log will be developed within one year of the SDMP being initiated. This will maintain a record of challenges facing the SDMP. At project level, the individual project leaders will manage risks and issues. The Energy & Sustainability Group will examine the log every 2 months in order to minimise the impact of conflicting issues. Core risks include availability of capital, continued commitment by senior staff and staff participation in the Carbon / Environmental Champion initiative.

6.7.4 Benefits Management

Carbon and financial benefits accruing from the individual projects will be measured from energy consumption data and invoicing information. Qualitative assessments will be made on the basis of £/Tonnes CO₂ and regular reports will highlight the current CO₂ output improvements.

In addition, initiatives relating to non UHL funded sources will be reported, e.g. alternative transport to work initiatives, will be calculated using available tools for national organisations e.g. Carbon Trust, DeFRA.

6.7.5 Reporting and Evaluation

This plan will be subject to annual review in order to take account of organisational change and planning and the implications of updated targets. This annual assessment will be approved by the Energy & Sustainability Group, prior to referral to the Trust Board for final signature.

In order to inform and assure our stakeholders that the plan is delivering and meeting its objectives, a reporting regime will ensure that the information is disseminated to meet this expectation. The Project Manager will have responsibility to ensure reports are suitable, accurate and presented on time.

Monthly

On a monthly basis reports, which reflect the environmental and financial effects of utility consumption, will be presented to the Director of Estates & Facilities, as project sponsor.

A summarised report, with suitable narrative will be sent to the Energy & Sustainability Group for information and will clearly identify any variances from target.

Carbon Champions will also receive a summarised monthly report which will identify the consumption and carbon impact in their local area.

Quarterly

Quarterly reports will be targeted at Senior Management level. These will be timed, as far as possible, to coincide with regular senior group meetings.

Information will be in an agreed format which will allow “non-technical” appraisal of the content but also assure management that investment and effort is being managed appropriately and meeting stated targets.

Annually

An annual Report will be made to the Trust Board and also key stakeholders, highlighting the achievements of the strategy and the proposed objectives for the following year.

6.8 HEALTHY, SUSTAINABLE AND RESILIENT COMMUNITIES (Climate Change Adaptation)

This SDMP sets out an action plan to mitigate climate change by reducing the Trust’s emissions and acting more sustainably. However, this will not protect it from the predicted effects of climate change such as longer and more frequent heat waves, increased flooding, harsher cold snaps and the impact these events will have on the Trust’s services. Adapting to climate change is a necessary strategy. It will ensure high quality services are maintained when the Trust has to cope with an influx of patients during critical climate events.

To ensure that Climate Change adaptation is effectively incorporated into the Trust’s business continuity, emergency planning and risk assessment procedures and that Climate Change risks are adequately catered for in the design and operation of the Trust’s estate

- The Trust will develop and review an adaptation plan using the UKCIP Wizard (<http://www.ukcip.org.uk/wizard/>) and SDU NHS guidelines (http://www.sdu.nhs.uk/documents/publications/Adaptation_Guidance_Final.pdf) during 2017.
- Estates will consider increased risk of premises flooding based on the Environment Agency (EA) guidelines.
- Estates will consider increased risk of inclement weather based on the Environment Agency (EA) guidelines and the NHS “Heatwave” guidance.
- Estates will consider risks to resilience of power and AC in the event of extreme climate conditions.
- IT will consider risks to ICT systems and suppliers of extreme climate conditions.
- The Trust will create a section in the Corporate Risk Register that addresses the challenges of building resilience to climate change which will cover the legal, financial, organisational, reputational and service risks.

6.9 SUSTAINABLE CLINICAL AND CARE MODELS (Sustainable pathways, Patient and Clinician led service redesign)

The trust will endeavour to implement sustainable pathways across all of its activities and processes. This will be with a strong focus on the a Patient and Clinician led service redesign, this will to ensure future developments are given the correct consideration sustainability and the aspects are correctly applied.

6.10 INNOVATION (How the providers will support innovation in sustainability - Design and Building Use)

6.10.1 Capital Plan

UHL is planning an ambitious reconfiguration over the next 5 years, with movement of services, refurbishment of existing buildings, the provision of new buildings, and the replacement of medical equipment, therefore a huge opportunity exists for our commitments on sustainability and our carbon emission reductions to become a reality. Given that all buildings and equipment have a “carbon footprint”, we will utilise the various standards and guidance, to set our minimum standards for building and equipment performance, looking to demonstrate improvements on these with robust life cycle analysis related to financial investment and carbon emissions.

By supporting inclusion of carbon emissions in the evaluation criteria, UHL will make an enormous contribution to meeting the targets set by this programme document. This undertaking would potentially make the biggest impact on the programme, as it would incorporate both the building fabric and the building services.

The Trust's Estates & Capital team has invested in a number of energy saving measures in recent years, including LED lighting in circulation areas and variable speed controllers on HVAC motors. Such initiatives have resulted in a gradual decrease in energy consumption.

The teams will continue to develop the estate and consider the following points:

- Will ensure that built environments are designed to encourage sustainability, including meeting Trust and national CO₂ reduction targets, and to promote wellness and resilience to Climate Change in all aspects of their operation.
- Clear sustainability targets will be set for new building projects and these will be monitored following commissioning,
- Will ensure that all staff, including temporary and agency workers, is aware of the Trust's commitment to sustainability and how this is influenced by the built environment.
- Estates and Procurement will work together to ensure that all design and building contractors are aware of the Trust's sustainability objectives and targets. Contractors will be required to demonstrate a commitment to sustainability within their own operations (i.e. by holding ISO14001 certification) and will be challenged to identify innovative and cost-effective solutions to enable the Trust to go beyond its SDMP targets.
- All decisions about design and build of Trust facilities must be explicit about how they encourage a broader approach to sustainability including transport, delivery of services and community engagement.
- All major building projects will be subject a BREEAM assessment to ensure that sustainability considerations are incorporated into planning and design decisions from the outset. As a minimum major refurbishments will be required to achieve a BREEAM rating of “very good” with any future new build projects achieving an “excellent” rating.
- Climate Change resilience and adaptation will be core factors in the planning and design of Trust estate.
- Estates will seek to engage both staff and external stakeholders in all major future planning activities.

6.10.2 Improving Building Services and Fabric

The proven benefits of improving the technical efficiency of heating plant, lighting fittings and ventilation plant will be exploited, along with improvements on controls, and metering to ensure efficiency gains are sustained. The opportunity to refurbish the building fabric and to procure new building stock will enable stringent air tightness, and insulation values to be embedded in the specifications, along with innovations of layouts and natural light and ventilation flows.

6.10.3 Life Cycle Costing: Procurement of Capital and Revenue Projects

This will be introduced at all levels of procurement, not only on major projects. Over the term of this plan, we intend that this will have become a crucial part of assessing the efficiency of equipment and buildings and the related cost/carbon impact. While the concept of life cycle costing is generally accepted as a common-sense

approach to adopt, we will integrate these measures into the purchasing mechanisms for both capital and revenue items.

6.11 METRICS (Targets, Annual reporting commitment)

The monitoring of progress supports decision making throughout the system by identifying hotspots and areas for action.

Large providers can contribute significantly to the sustainable development agenda, and are in a favourable position to report directly on progress. The key indicators for large providers are the following:

Key indicators

- Board approved Sustainable Development Management Plan (SDMP)
- Board approved plans to adapt activities and infrastructure as a result of climate change and adverse weather
- Organisation energy use per patient contact
- Organisation water use per patient contact
- Organisation waste to landfill per patient contact
- Good Corporate Citizen Assessment Model score Additional

useful indicators

- Organisational carbon footprint:
 - Building energy use
 - Procurement, and
 - Travel per patient contact
- Proportion of procurement spend in the local community, which can include capital programme and staffing locally
- Emergency admissions for acute conditions that should not usually require hospital admission
- Indicator of adoption of innovative effective and sustainable medical technologies

These implementation notes recognise that whilst the core indicators above assist those organisations that are only now beginning to ready their selves to take their initial steps along their sustainable development path, other organisations have journeyed some considerable way in terms of their sustainability. Using a list of indicators below, further strengthens sustainability reporting.

Leadership, engagement and development	Commissioning and Procurement	Sustainable clinical and care models	Healthy, sustainable and resilient communities	Carbon hotspots (and environmental impact)	Innovation	Social value
<ul style="list-style-type: none"> - Board approved SDMP - Board level lead for sustainable development - Sustainability placed onto the organisations Board paper front sheet and supporting guidance 	<ul style="list-style-type: none"> - Proportion of procurement spend in the local community (could also include the capital programme and staffing locally) - Proportion of contracts where contractor has EMS or routinely publicly reports the carbon footprint for their organisation - Self-assessment on ethical procurement workbook 	<ul style="list-style-type: none"> - Emergency admissions for acute conditions that should not usually require hospital admission (NHSOF 3a) - Patient access to green space, sunlight, thermal comfort (something from PLACE?) - Average distance for patients to services 	<ul style="list-style-type: none"> - Board approved plans to adapt the delivery of activities and infrastructure to adverse weather and changes expected with climate change - Green or Active travel plan - Handling capacity and throughput demands under unexpected circumstances (PAM SAQ Effectiveness) 	<ul style="list-style-type: none"> - Organisation carbon footprint: building energy use, procurement and travel - Organisation water use per patient contact - Organisation waste tonnes to landfill per patient contact 	<ul style="list-style-type: none"> - Indicator of adoption of innovative effective and sustainable medical technologies - Use of ICT to reduce travel and resource use e.g. use of videoconferencing and moving to paperless - % of NHS organisations with an ongoing project focused on sustainable development e.g. Teleconference replacing car and public transport travel 	<ul style="list-style-type: none"> - Good Corporate Citizen Assessment Model score - Indicator of use for Public Sector (Social Value) Act 2012 - Percentage of spend where Social Value has been considered

Leadership, engagement and development	Commissioning and Procurement	Sustainable clinical and care models	Healthy, sustainable and resilient communities	Carbon hotspots (and environmental impact)	Innovation	Social value
<ul style="list-style-type: none"> - Sustainability (utility use, in particular) included in business cases - Sustainability issues, such as carbon reduction, are included in the job descriptions of all staff - Sustainability is promoted to employees e.g. green workplace, e-learning - % of staff who don't drive to work 	<ul style="list-style-type: none"> - Sign up to the Ethical Trade Initiative (ETI) - Adoption of a sustainable procurement charter - Value (£) of efficiency savings realised as a result of sustainable procurement initiatives - Tonnes of CO2e emissions avoided as a result of sustainable procurement 		<ul style="list-style-type: none"> - Anticipating future adaptability (PAM SAQ Effectiveness) - Asset improvement, disposal & business continuity strategies (PAM SAQ Finance&VFM) - Assessment using a Green Infrastructure tool - Climate Readiness assessment 	<ul style="list-style-type: none"> - Organisation carbon Footprint per m2 - Organisation carbon Footprint per patient contact - Carbon footprint of anaesthetic gases per inpatient - Use of process methodologies for minimising waste e.g. in theatres 		<ul style="list-style-type: none"> - Improving functional ability in people with long-term conditions - employment of people with long-term conditions (NHSOF 2.2, PHOF 1.8, ASCOF 1E)

Leadership, engagement and development	Commissioning and Procurement	Sustainable clinical and care models	Healthy, sustainable and resilient communities	Carbon hotspots (and environmental impact)	Innovation	Social value
<ul style="list-style-type: none"> - Staff surveys are used to assess awareness and demonstrate behaviour change - Sustainability is part of the organisations Mandatory training and offer additional training modules as part of the organisations training matrix. - Local environmental representative programme in place - ISO accreditation, Social Enterprise Mark or Environmental Management System in place 	<ul style="list-style-type: none"> - Tonnes of waste avoided as a result of sustainable procurement - % progress against a recognised model of sustainable procurement (e.g. flexible framework, good corporate citizenship) - % (by number or value) of procurements including consideration of sustainable development - Number / Value of items purchased that meet the Government Buying Standards 			<ul style="list-style-type: none"> - Renewable energy to the grid 		

Leadership, engagement and development	Commissioning and Procurement	Sustainable clinical and care models	Healthy, sustainable and resilient communities	Carbon hotspots (and environmental impact)	Innovation	Social value
	<ul style="list-style-type: none"> - Pharmaceutical spend per patient contact 					

KEY:

N	Indicator Nationally	Indicators published e.g. outcomes frameworks and published datasets
L	Indicator Locally	Monitoring and accountability can take place at local level, within organisation
S	New suggested Indicators	Monitoring this needs a definition, metadata development and collection where appropriate
P	Placeholder without indicators	An Indicator needs to be identified
	Large or Small providers	Based on annual public spend (total including all contracts) being above OJEU procurement limit

(PHOF)	Public Health Outcomes Framework
(NHSOF)	NHS Outcomes Framework
(NI)	National Indicator (current and former)
(SDU)	Currently collated by Sustainable Development Unit
(ERIC)	Estates Return Information Collection

6.12 SOCIAL VALUE (Partnerships and Involvement, Environmental improvement, Local Social Capital, Local Economic Value)

By working in partnership with Local Authorities both Leicester City and County Councils, PCTs, other public services and community-based organisations, UHL intends to play its part in delivering new ways of better healthcare in the community which can promote social cohesion and wellbeing.

- The Communications team will develop an active communications strategy to raise awareness about sustainability at every level of the organisation. In addition, the strategy will address reporting on sustainability to the public and promotion of the wider benefits and importance of sustainability to the patients and visitors to the Trust – e.g. promoting healthier lifestyles and sustainable, low-carbon travel.
-
- The Trust will become an active member of local sustainability networks, in particular the Local Strategic Partnership for Leicester. The Trust will ensure that its work on sustainability is aligned with and supports “Shaping the future”, the Sustainable Community Plan for the local area.
-
- The Trust will endeavour to re-establish the East Midlands Energy Managers’ Forum to share best practice on energy and carbon management. Estates will regularly and actively benchmark itself against other Trusts to test the effectiveness of its plans and projects.
-
- The Trust will ensure that the Clinical Commissioning Group is sighted on its SDMP. Communications will ensure that this document and any future updates are available to the public via its website. The Trust will review commissioner’s expectations and adjust the SDMP accordingly.
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- The Trust will take lead on sustainable development and carbon reduction within the NHS at a local and regional level and be an exemplar to other sectors and to other health organisations.

6.12.1 SDMP Possible Projects to Reduce Emissions

The following sets out the projects identified to deliver the reduced emissions. Due to varying factors such as finance, resources etc, the impact of these projects, although not following the proposed target line, will contribute to achieving the Trust emission target.

During the Opportunities Workshop held to inform and to engage with stakeholders, the events produced a variety of ideas and prospective savings opportunities will be evaluated for CO₂ reduction potential and ease of implementation, and were viable to be progressed. Many of the ideas with lower return potential will be kept on file and reviewed as part of the Awareness Training and Carbon Champion programmes. The Opportunities event proved to be a valuable exercise and will be promoted as an annual event, presenting the opportunity to inform staff of ideas which have been implemented and canvassed for others to be added to the plan.

7. PROJECTS BEING CONSIDERED FOR FURTHER ACTION

7.1 Leicester Royal Infirmary

- 1 Upgrade original plates to the large plate heat exchangers to Balmoral and Windsor
- 2 Standby generators run indication, as they sometimes do not turn off.
- 3 Balmoral water main risers pipe is pin holing
- 4 General lighting upgrades inc. LED fittings, controls, dimmers, PIR's, photocells and installation
- 5 Balmoral - Kimmouth Ward- replacement of windows or secondary glazing, renew heating controls
- 6 Upgrade Power Factor Correction
- 7 Install smart metering to large consumer
- 8 BMS review and re-set the configurationally set points
- 9 Energy Awareness Campaign
- 10 Variable Speed Drives general locations.

7.2 Glenfield Hospital

- 1 Replacement of the local pneumatic Johnson control systems
- 2 BMS review and re-set the configurationally set points
- 3 General lighting upgrades inc. LED fittings, controls, dimmers, PIR's, photocells and installation
- 4 Variable Speed Drives general locations
- 5 Upgrade Phase 1 & 2 Main Circ Pumps

- 6 Energy Awareness Campaign.
- 7 Replace the Medical Air Vacuum pumps.
- 8 Insulate the take-off pipes & upgrade the evaporators to the VIE
- 9 Install smart metering to large consumers
- 10 Upgrade Power Factor Correction

7.3 Leicester General Hospital

- 1 Install Variable Speed Drives.
- 2 Upgrade Boiler House 2 off to the main circ pumps
- 3 Upgrade Boiler House 3 off to the ID fans
- 4 General lighting upgrades Inc. LED fittings, controls, dimmers, PIR's, photocells and installation.
- 5 Boilerhouse lagging
- 6 Replace BMS Site or BMS review and re-set the configurationally set points
- 7 Install smart metering to large consumers
- 8 Upgrade Power Factor Correction
- 9 Replacement TRV's
- 10 Replacement window programme

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Appendices

Appendix 1 - SDMP Action Plan aligning with the Sustainable Development Strategy 2014

Area of Focus	SDMP Objective	Plan	Metrics	Management: When/Who/ Baseline
<p>1. Overall Corporate Vision and Governance for Sustainable Development</p>	<p>The governance arrangements for sustainable development are clear and accountable</p> <p>Responsibility and accountability for sustainable development is clear in our organisation</p>	<ul style="list-style-type: none"> > Report SDMP key performance indicators to the board or governing body on a regular basis (at least 6 monthly) > Report sustainability performance via the annual report. 	<p>Potential Sources:</p> <ul style="list-style-type: none"> > Use Sustainability Reporting Template from SDU website <p>(Advice on measuring sustainability available at: www.sduhealth.org.uk/measure)</p>	<p>November</p>
<p>2. Leadership, engagement and development</p> <p>(Module and Implementation notes available at: www.sduhealth.org.uk/led)</p>	<p>Leadership: The organisation's vision for sustainable development is clear</p> <p>Leaders at all levels have engaged widely and developed a narrative for sustainable development that aligns visions, priorities and delivery</p>	<ul style="list-style-type: none"> > Share success stories and develop a clear organisational vision statement for sustainability with staff > Nominate a board (governing body) level executive and/or non-executive lead for sustainability > Run leadership programmes to promote sustainable leadership competencies > Form a task force consisting of representatives and champions of various departments and professions within the organisation to help guide and implement efforts. 	<p>Potential Sources:</p> <ul style="list-style-type: none"> > Use Sustainability Reporting Template from SDU website <p>(Advice on measuring sustainability available at: www.sduhealth.org.uk/measure)</p>	<p>August 2017</p> <p>Martin Owen</p> <p>Initial report</p>

Area of Focus	SDMP Objective	Plan	Metrics	Management: When/Who/ Baseline
<p>2. Leadership, engagement and development</p> <p>(Module and Implementation notes available at: www.sduhealth.org.uk/led)</p>	<p>Staff development: The Health and social care sector is often the largest local employer, public health and sustainability start at home. Organisations can support their staff by promoting increased awareness, supporting behavioural change, encouraging new ways of working, low carbon travel and the use of ICT</p> <p>All staff are aware of the benefits of acting sustainably and have the competencies and skills to implement sustainability initiatives</p>	<ul style="list-style-type: none"> > Include a section on sustainability in staff induction > Include sustainability as a duty in all job descriptions >review the current staff bike salary sacrifice scheme >Set up schemes to encourage healthy, local and affordable food > Promote the development of leadership competencies to deliver carbon reduction and improved corporate social responsibility performance > Review workforce policies to ensure they promote sustainable behaviour > Hold annual sustainability awards to recognise the most environmentally and socially sustainable team/department. 	<p>Potential Sources:</p> <ul style="list-style-type: none"> > % of staff who have received training on sustainability > Workforce section of the Good Corporate Citizen (GCC) assessment model > Use Sustainability Reporting Template from SDU website <p>(Advice on measuring sustainability available at: www.sduhealth.org.uk/measure)</p>	<p>2017</p> <p>Martin Owen</p> <p>Initial report</p>
<p>2. Leadership, engagement and development</p> <p>(Module and Implementation notes available at: www.sduhealth.org.uk/led)</p>	<p>Engagement: Organisations can engage local people, service users and local communities in improving the sustainability of local places</p> <p>Our approach to environmental and social responsibility is supported and owned by local people</p>	<ul style="list-style-type: none"> > Include sustainability questions in engagement processes regarding the redesign of local care services > Understand and harness the assets that exist in local communities to enable a more sustainable delivery of health and care in the future > Outline a communications plan for reporting on sustainability to the public. 	<p>Potential Sources:</p> <ul style="list-style-type: none"> > Community engagement section of the Good Corporate Citizen (GCC) assessment model <p>(Advice on measuring sustainability available at: www.sduhealth.org.uk/measure)</p>	<p>2018</p> <p>Martin Owen Tony Roost Communication</p> <p>Initial report</p>

Area of Focus	SDMP Objective	Plan	Metrics	Management: When/Who/ Baseline
<p>2. Leadership, engagement and development</p> <p>(Module and Implementation notes available at: www.sduhealth.org.uk/led)</p>	<p>Role of partnerships / Networks: Organisations can consolidate partnership and make use of its leverage within local frameworks</p> <p>The organisation is an active member of the local sustainability and/or climate change network</p>	<p>> Develop a whole systems approach by specifying how the organisation will engage with partners to deliver SD.</p>	<p>Potential Sources:</p> <p>> Partnership and Planning section in Community engagement section of the Good Corporate Citizen (GCC) assessment model</p> <p>(Advice on measuring sustainability available at: www.sduhealth.org.uk/measure)</p>	<p>2018</p> <p>Martin Owen Tony Roost Communication</p> <p>Initial report</p>
<p>3. Healthy, sustainable and resilient communities</p> <p>(Module and Implementation notes available at: www.sduhealth.org.uk/resilience)</p>	<p>Risk Assessment: Assessing climate change risks to the organisation is an important first step in developing an adaptation plan</p> <p>Current and future risks to the organisation from changing times and climates are understood and minimised</p>	<p>> Create a section in the organisational risk register that addresses the challenges of building resilience to climate change and covers the legal, financial, infrastructure and service risks</p> <p>> Identify risks and opportunities to health and wellbeing in the local area, assess levels of preparedness and develop plans to improve resilience e.g. by using UKCIP climate projections tools</p> <p>> Use the Climate Ready BACLIAT tool to complement the process of assessing risks and opportunities associated with climate change locally.</p>	<p>Potential Sources:</p> <p>> SDU Guidance on Adaptation</p> <p>> Risk Assessment in Adaptation section of the Good Corporate Citizen (GCC) assessment model</p> <p>> Environment Agency/UK Climate impact Project (UKCIP) Tools</p> <p>> Organisational Risk register</p> <p>(Advice on measuring sustainability available at: www.sduhealth.org.uk/measure)</p>	<p>2018</p> <p>Martin Owen Glyn Lambley Aaron Vogel</p> <p>Initial report</p>

Area of Focus	SDMP Objective	Plan	Metrics	Management: When/Who/ Baseline
<p>3. Healthy, sustainable and resilient communities</p> <p>(Module and Implementation notes available at: www.sduhealth.org.uk/resilience)</p>	<p>Adaptation planning: Communities, services and infrastructures should be prepared and resilient to weather events and other crises</p> <p>Develop an organisational adaptation plan that links to business continuity and emergency planning processes</p>	<p>> Draw on existing risk assessments, adaptation tools such as the UKCP09 projections and other local information to assess the risks to continuity and assets (buildings, emergency services, vehicles and the supply chain for fuel, food and key products)</p> <p>> Involve business continuity and emergency planning colleagues in developing an Adaptation Plan as a core component of the SDMP. The adaptation plan should link to heat wave and cold weather plans, flooding, emergency preparedness and business continuity plans.</p>	<p>Potential Sources:</p> <p>> Adaptation section of the Good Corporate Citizen (GCC) assessment model</p> <p>(Advice on measuring sustainability available at: www.sduhealth.org.uk/measure)</p>	<p>2018</p> <p>Martin Owen Glyn Lambley Aaron Vogel</p> <p>Initial report</p>
<p>3. Healthy, sustainable and resilient communities</p> <p>(Module and Implementation notes available at: www.sduhealth.org.uk/resilience)</p>	<p>Designing the built environment: Built environments can be designed to encourage sustainable development and resilience to a changing climate in every aspect of their operation.</p> <p>The entire environment in which our organisation delivers care will be low carbon, promote wellness and be resilient to changes in climate</p>	<p>> Produce options for improved access and increased green space in health and care organisation grounds</p> <p>> Carry out a risk assessment on buildings to ensure they are resilient to projected changes in climate and weather extremes</p> <p>> Refurbish buildings to reduce their carbon impact (e.g. wall insulation).</p>	<p>Potential Sources:</p> <p>> Data e.g. monitored for Estates Return Information Collection (ERIC)</p> <p>> The Department of Health Premises Assurance Model (PAM)</p> <p>> Environment Agency/UK Climate impact Project (UKCIP) Tools</p> <p>> Buildings section of the Good Corporate Citizen (GCC) assessment model</p>	<p>2018</p> <p>Martin Owen Glyn Lambley Aaron Vogel Nigel Bond</p> <p>Initial report</p>
<p>4. Sustainable clinical and care models</p>	<p>Service Redesign: The design of more integrated care services provides a great opportunity</p>	<p>> Include environmental and social sustainability assessments on business case</p>	<p>Potential Sources:</p> <p>> Models of care section of Good Corporate Citizen (GCC) assessment</p>	

Area of Focus	SDMP Objective	Plan	Metrics	Management: When/Who/ Baseline
<p>(Module and Implementation notes available at: www.sduhealth.org.uk/moc)</p>	<p>developing services in a way that also delivers wider societal and environmental benefits</p> <p>Transformation of our Service delivers improved health outcomes coupled with social and environmental benefits</p>	<p>and service redesign templates</p> <ul style="list-style-type: none"> > Review models of care and patient pathways in every specialty taking into account the overhead use of resources and carbon footprint to identify where resources are used and can be reduced > Consider most appropriate service location to minimise travel and facilitate access, including use of mobile technology or telephone clinics. 	<p>model</p> <p>(Advice on measuring sustainability available at: www.sduhealth.org.uk/measure)</p>	<p>2018</p> <p>Martin Owen Glyn Lambley Aaron Vogel</p> <p>Initial report</p>
<p>5. Commissioning and procurement</p> <p>(Module and Implementation notes available at: www.sduhealth.org.uk/commproc)</p>	<p>Commissioning Organisations Commissioning: Sustainability and social value can be optimised in the commissioning cycle when it is a core aim, it is built into the process from the outset and then embedded into all subsequent stages</p> <p>We are key partners in enhancing the environmental, social and economic wellbeing of local areas</p>	<ul style="list-style-type: none"> > Ask provider organisations to demonstrate their progress on sustainability, carbon reduction and adaptation > Develop clear procedures on how the organisation complies with the Public Services (Social Value) Act 2012 > Set objectives for enhancing social benefits identifying how the organisation can support the wellbeing of the local area(s) > Outline how the commissioning approach will enable small and medium-sized enterprises (SMEs), social enterprises and other enterprise models to participate in public service commissioning requirements. 	<p>Potential Sources:</p> <ul style="list-style-type: none"> > Use Sustainability Reporting Template from SDU website <p>(Advice on measuring sustainability available at: www.sduhealth.org.uk/measure)</p>	<p>2018</p> <p>Martin Owen Tony Roost Communication</p> <p>Initial report</p>

Area of Focus	SDMP Objective	Plan	Metrics	Management: When/Who/ Baseline
<p>5. Commissioning and procurement</p> <p>(Module and Implementation notes available at: www.sduhealth.org.uk/commproc)</p>	<p>Finance: Quantify and consider sustainability options as part of cost improvement programmes</p> <p>Triple bottom line for Sustainability: environmental, social and cost impact assessment performed for all projects</p>	<ul style="list-style-type: none"> > Whole lifecycle costing for procurement contracts > Net present value and return on investment for projects > Marginal Abatement Cost (MAC) Curves for all large investments and projects. 	<p>Potential Sources:</p> <ul style="list-style-type: none"> > Use Sustainability Reporting Template from SDU website > Save Money by Saving Carbon for information about MAC Curves on SDU website 	<p>2018</p> <p>Martin Owen Nigel Bond</p>
<p>5. Commissioning and procurement</p> <p>(Module and Implementation notes available at: www.sduhealth.org.uk/commproc)</p>	<p>Procurement carbon emissions: Taking a whole lifecycle approach to procuring goods and services can reduce in-use and disposal costs and carbon emissions.</p> <p>Reduce carbon emissions from goods and services by 4% this year</p>	<ul style="list-style-type: none"> > Use a process methodology (for example Lean systems, Six Sigma, Total Quality Management) to identify and eliminate unnecessary use of resources > Review existing high expenditure goods and services to identify action > Use local food suppliers and businesses where possible > Encourage/require suppliers to develop their own SDMPs > Include the energy cost of operating equipment in the business case when purchasing > Procure the more environmentally friendly product when choosing between comparable products. 	<p>Potential Sources:</p> <ul style="list-style-type: none"> > Procurement For Carbon Reduction (P4CR) framework > Procurement section of the Good Corporate Citizen (GCC) assessment model > Government Buying Standards and Greening Public Procurement <p>(Advice on measuring sustainability available at: www.sduhealth.org.uk/measure)</p>	<p>2018</p> <p>Martin Owen Tony Roost</p> <p>Initial report</p>
<p>6. Carbon hotspots</p> <p>(Module and Implementation</p>	<p>Energy: Agree energy saving and carbon reduction targets. E.g. Reduce absolute carbon emissions by 4% this year</p>	<ul style="list-style-type: none"> > Run a staff energy awareness campaign > Installation/upgrading of insulation for instance walls, roofs, pipework, window 	<p>Potential Sources:</p> <ul style="list-style-type: none"> > Energy data as gathered for the Estates Return Information Collection (ERIC) or from the energy bill 	

Area of Focus	SDMP Objective	Plan	Metrics	Management: When/Who/ Baseline
<p>notes available at: www.sduhealth.org.uk/carbon</p>		<p>glazing, draught proofing. > Use of energy saving lighting technology for example high frequency lighting, LED lighting. > The efficient provision of heat, for example using high efficiency boilers or district heat networks > Review the software to turn office computers off overnight</p>	<p>> Display Energy Certificate (DEC) Advisory report > Metered energy use > Use Sustainability Reporting Template from SDU website > Facilities management section of the Good Corporate Citizen (GCC) assessment model</p>	<p>2018 Martin Owen Initial report</p>
<p>6. Carbon hotspots (Module and Implementation notes available at: www.sduhealth.org.uk/carbon)</p>	<p>Low carbon travel, transport and access: The emphasis could be on providing low carbon models of care by focusing on care closer to home, telemedicine, videoconferencing for meetings etc. Teleconferencing to replace 4% of business miles</p>	<p>> Assess environmental impacts in business cases for proposed new models of care > Review recurring business mileage expenditure to identify meetings that could be conducted by teleconferencing > Develop an active travel plan that promotes the use of public transport, cycling and walking > Review car lease scheme arrangements to encourage the use of low emitting vehicles.</p>	<p>Potential Sources: > Use Sustainability Reporting Template from SDU website > Business mileage expense data from finance department > Staff travel surveys > Travel section of the Good Corporate Citizen (GCC) assessment model > Energy Saving Trust fleet review</p>	<p>2018 Martin Owen Ruth ward John Clarke Initial report</p>
<p>6. Carbon hotspots (Carbon Reduction Strategy includes a water section: www.sduhealth.org.uk/crs)</p>	<p>Water: Ensure the efficient use of water by measuring and monitoring its usage E.g. Reduce metered water use by 2% this year</p>	<p>> set stretching targets around operational response time for repairing leaks > Avoid the routine purchasing of bottled water unless clinically required > Install water efficient technology.</p>	<p>Potential Sources: > Local water company may be able to provide carbon data and identify leaks > Water consumption data e.g. monitored for Estates Return Information Collection (ERIC) > Use Sustainability Reporting Template from SDU website</p>	<p>2018 Martin Owen Initial report</p>

Area of Focus	SDMP Objective	Plan	Metrics	Management: When/Who/ Baseline
<p>6. Carbon hotspots</p> <p>(Carbon Reduction Strategy includes a waste section: www.sduhealth.org.uk/crs)</p>	<p>Waste: Monitor, report and set targets on management of domestic (and where applicable clinical waste), including reduction and appropriate disposal of waste in medicines, food and ICT.</p> <p>Increase % of Organisational waste recycled by 1%</p>	<ul style="list-style-type: none"> > conduct an audit on appropriate segregation of clinical and domestic waste > Provide recycling facilities in public areas and offices > Work with suppliers to reduce the amount of packaging products come in. 	<p>Potential Sources:</p> <ul style="list-style-type: none"> > Waste contracts and collection receipts > Waste data e.g. monitored for Estates Return Information Collection (ERIC) > Facilities Management section of the Good Corporate Citizen (GCC) assessment model > Use Sustainability Reporting Template from SDU website (Advice on measuring sustainability available at: www.sduhealth.org.uk/measure) 	<p>2018</p> <p>Martin Owen Mark Evans</p> <p>Initial report</p>