



Carbon Reduction Metrics for Healthcare Regulation

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Report

Introduction

In August 2008, the Healthcare Commission (HCC) commissioned the NHS Sustainable Development Unit (NHS SDU) to evaluate the data currently available to support the introduction of carbon reduction monitoring into the assessment of NHS organisations.

The remit set by the HCC was to identify *only* those areas where there is data currently collected. This means that most of the recommendations could be implemented without mandating further data collection for NHS organisations. This report firstly maps out the existing data that could support outcome measures for carbon reduction. Because few numerical measures are currently available systematically, this report then also explores the potential for process indicators to be used for the same purpose.

This report summarises the research carried out through desktop means, stakeholder workshops and expert advice. It has taken into account good practice demonstrated in other regulatory bodies such as the Audit Commission, and other areas of the public sector such as the Sustainable Operations on the Government Estate¹ (SOGE) framework. It has sought advice from the Sustainable Development Commission (SDC), the government's independent advisor on sustainable development.

The NHS SDU identify this report as a key first step in developing carbon reduction metrics for the NHS and ensuring more broadly that sustainable development is embedded within the regulatory framework. Further research and development is clearly necessary. The NHS SDU has committed to take this work forward with the SDC and Department of Health (DH). A discussion paper is being written which sets out in more detail areas with the potential to establish further metrics to support the promotion of sustainable development (SD) and carbon reduction in the NHS.

All recommendations are highlighted in grey boxes and listed in the recommendations section.

¹ SOGE *Targets* [Online] Available at: http://www.ogc.gov.uk/sustainability_soge_targets.asp [Accessed 20/02/2009]



Background

Carbon Reduction

Climate Change is the biggest health threat facing the world today. It is caused by significantly increased levels of carbon emissions which means that global temperatures will rise to a level that will have major impacts on the geography and sociology of all countries. This impacts on every country, every organisation and every individual. The UK Government has been the first to respond by establishing legislation requiring the UK to reduce its carbon emissions by 80% by 2050³.

The NHS, Europe's biggest employer, has a role to play in responding to this challenge by adapting to the effects of climate change and by mitigating or minimising its impact through changes to services and human behaviour. The NHS needs to consider this in the light of two key elements:

- Firstly the financial impact of rising fuel costs and carbon taxation, which means that NHS organisations will be forced to consider carbon reduction as part of their business processes and
- Secondly, climate change threatens the health of the public. Indeed NHS organisations need to act now to protect the health and future wellbeing of the population they serve.

Following a four month consultation process, with an impressive 66% response rate, the NHS Carbon Reduction Strategy (CRS) for England was launched in January 2009.

The CRS calls for carbon reduction to form an integral part of both the performance and regulatory frameworks in the NHS. Indeed 78% of all NHS Trusts who responded think that performance against reducing carbon should be measured and managed effectively as part of core business.

In particular consultation responses indicated this could be achieved by ensuring that carbon reduction is included in:

- Tier 2 of the Vital Signs as part of the NHS in England: Operating Framework
- The HCC/CQC measures, assessments and reviews
- The objectives within commissioning contracts
- NHS discussions with Local Authorities to form part of the Local Area Agreements targets

Carbon Footprint

The Carbon Footprint is used to describe the carbon emissions generated from human activity and in this report relates to the carbon emissions generated by an organisation. The carbon footprint for NHS England was calculated using emissions of carbon dioxide gas (CO₂) as this covers the majority of greenhouse gas emissions for the NHS. The measurement can vary dependent on the scope of services included as this may simply be related to buildings or to include wider impacts of an organisation such as items purchased.

Different footprinting models use different definitions of Scope. The GHG protocol⁴ is a widely used definition:

- Scope 1 – emissions from burning fossil fuels (building energy use - gas, coal, oil etc.) including fuels from vehicles owned by the organisation (petrol, diesel etc.) and chemical reactions. Sometimes this is referred to as the direct carbon footprint since this is directly under the control of the organisation
- Scope 2 – emissions from electricity used by the organisation
- Scope 3 – emissions from other activities which the organisation can impact e.g. energy used in production of goods purchased by the organisation

³ Climate Change Act 2008. (c.27), London: HMSO

⁴ GHG Protocol *Corporate Standard* [Online] Available at: <http://www.ghgprotocol.org/> [Accessed 02/03/2009]

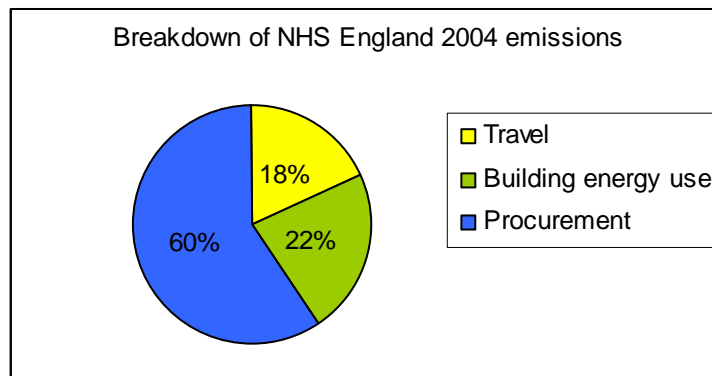


NHS England footprint

The NHS is leading the way in developing a means of measuring the whole carbon footprint to include:

- NHS activities
- Travel to and from NHS sites
- Embedded carbon in the procurement of goods and services

A full footprint was calculated for the NHS as a whole, using methodology from the Stockholm Environment Institute. The breakdown of the NHS carbon footprint for 2004 is as follows:



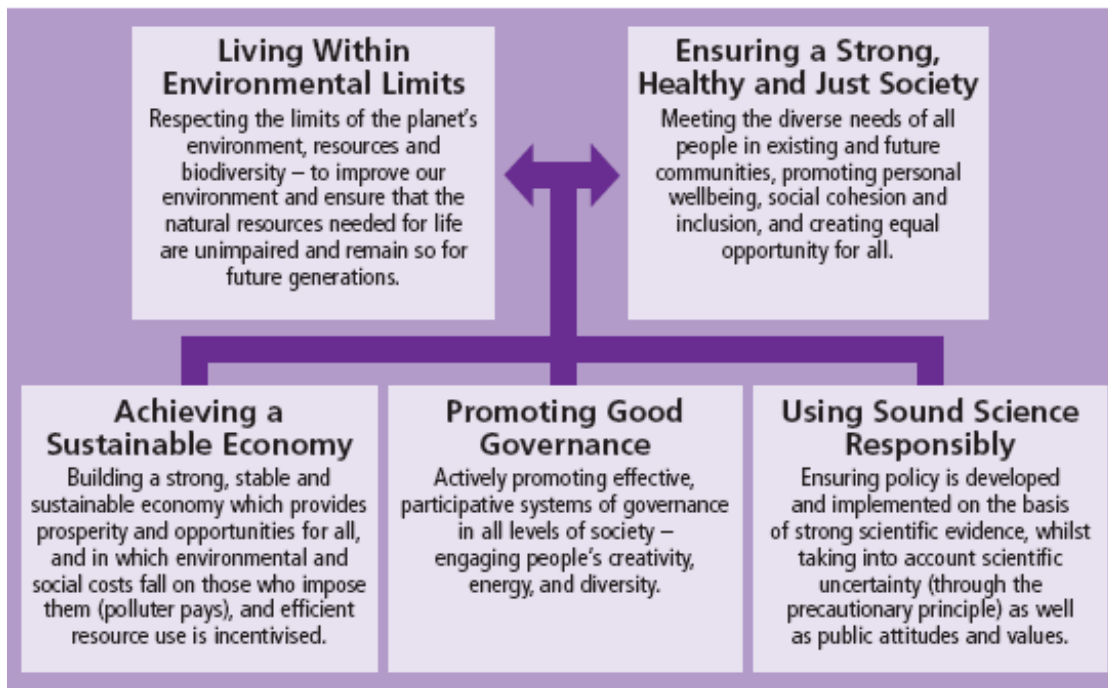
The diagram above shows that 22% of the carbon footprint for NHS England relates to building energy use with the remainder from travel (18%) and procurement (60%).

National datasets for calculating the carbon footprint for an organisation's building energy use, waste and water are already available. These areas are significant since they are within the direct control of an organisation and impact on both value for money and health. Waste and water also have a greater impact in terms of sustainability than just the carbon footprint. Combining the carbon footprint for building energy use (22%) with waste and water (1% of procurement) still only covers 23% of the entire carbon footprint.

Other important areas such as the carbon footprint from transport (18%) and remaining procurement (59%) do not have a standardised method of measurement and while there is potential to develop metrics, there is no data currently collected which would support this. Setting indicators in these areas prematurely may lead to a number of different approaches and would not provide information which could be benchmarked. Recognising the importance of the contribution to the overall carbon footprint of transport and procurement, further research is required to quantify the impact of each organisation on the remaining 77%. As knowledge in this area develops the metrics included in regulation can be updated to align more closely with the whole carbon footprint for every NHS organisation.

Sustainable Development

Sustainable Development means meeting the goals of today without compromising the ability of future generations to meet their needs. Sustainable development is also about achieving a strong, healthy and just society that at the same time manages within its environmental limits. This is strongly underpinned by the human rights act and the reduction of health inequalities.



Principles of Sustainable Development

Carbon reduction relates to the key principle of 'living within environmental limits'. Carbon measurement would be an important part of assessing the contribution of the NHS to the sustainable development agenda as a whole, and needs to be referred to in this context.

Regulation

Public Sector Regulation

Regulators such as the Audit Commission, and organisations such as the Environment Agency, Local Government Association and the Improvement and Development Agency, have all publicly stated their commitment to addressing carbon and sustainability both in relation to their own operational activity and of the public sector organisations they interact with. In particular, the Audit Commission's Statement of Intent says:

"[We] will build sustainable development principles into all our regulatory work. For example, the new Comprehensive Area Assessment (CAA) will include measures on sustainable development, as will future use of resources judgements. This approach marks a significant sharpening of the Commission's focus on sustainable development."

The Audit Commission promote value for money (VFM) through auditing public services. Their assessments for Primary Care Trusts (PCTs) are being brought in line with Local Government as part of the Comprehensive Area Assessment (CAA), moving away from the Auditors Local Evaluation (ALE) to the Use of Resources (UoR) framework. This change has introduced a distinction between the following sections:

- Managing finances - focusing on sound and strategic financial management
- Governing the business - focusing on strategic commissioning and good governance
- Managing resources - focusing on the effective management of natural resources, assets and people



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The UoR framework considers three key lines of enquiry (KLOEs) in relation to managing resources, in the natural resources section. This evaluates whether the organisation:

- Understands and can quantify its use of natural resources and can identify the main influencing factors
- Manages performance to reduce its impact on the environment
- Manages the environmental risks it faces, working effectively with partners

At present managing resources is not being used in the VFM calculation for PCTs, however this could be used as a basis for monitoring sustainable development performance in PCTs.

It is unclear what information might be requested for PCTs to demonstrate they have made progress on these points. The indicators highlighted in this report could be used to support these key lines of enquiry as they identify core elements for the first two KLOEs above.

In 2006 the government developed a framework called SOGE. This sets targets in sustainability for government operations with targets for carbon reductions in building energy use, waste and water. Regulation on indicators for building energy use, waste and water should be seen as core to establishing performance in sustainable development.

Healthcare regulation

The commitment to regulate carbon reduction has also increased within the NHS with the inclusion of the following phrase in the Operating Framework:

“The NHS can make significant contributions to reducing its carbon impact. Every NHS organisation should ensure that it measures and progressively reduces its own carbon footprint. This will save resources now, improve health today and set an important example to deliver high quality and sustainable services for the future.”

The Vital signs component of the Operating Framework includes a carbon/energy efficiency metric which is currently in Tier 3, meaning it is voluntary for NHS organisations.

Care Quality Commission

CQC comes into existence on April 1st 2009. It will replace the Healthcare Commission, the Commission for Social Care Inspection and the Mental Health Act Commission. CQC will register and conduct periodic reviews of providers as well as assess health and social care commissioning. CQC is therefore bringing together regulation for both health and social care services, including private and NHS organisations. In addition it will play a key role in the new Comprehensive Area Assessment which is co-ordinated by the Audit Commission. The role of the CQC is to work closely with other regulators to assess performance on population health.

Commissioners have a responsibility to set standards for the sustainability of their provider services. This could include setting financial incentives for providers to reduce their CO₂ emissions from building energy use, reductions in waste to landfill and incineration, increased recycling and reductions in water use. Commissioning processes can also support carbon reduction through partnership working towards Board approved Sustainable Development Action Plans (SDAP) encompassing both provider services and commissioning organisations.

As World Class Commissioning (WCC) develops further the measures of sustainability need to be given greater significance. There are many potential roles for commissioners to support sustainability, all of which will need to be based on sustainable development indicators.



Research Methodology

This report is based on the research methodology outlined below:

- Desktop research into carbon reduction in regulation, healthcare, measurement of carbon footprint and links between carbon reduction and population health benefits
- Workshops with experts to understand the information gathered by NHS organisations and where this is collected nationally
- Further engagement with experts and stakeholders to guide further information and the impact of potential changes
- Advice from SDC providing consistency with work going on in other public services

Desktop research highlighted the information already available to organisations (including the NHS) for carbon reduction and measuring progress. This background information was used as a baseline for developing agreement and further discussion through in depth workshops with experts in procurement, travel, food, commissioning and waste. The workshops explored the extent of data already available and the potential to access increased levels of data pertaining to NHS carbon emissions.

The content of this report was circulated to relevant experts and organisations. Comments and further feedback have been incorporated. Most contributors welcomed the discussions and input to ensure that the use of SD and carbon reduction metrics are maximised and developed further within the NHS.

This report sets out only those outcome indicators for which data is currently available and a recommendation for a process indicator which could be implemented as an interim measure. A further discussion paper which highlights the work required to develop metrics further will be published in Spring 2009.

Proposals

Indicators

The review of existing metrics shows that some data is already routinely collected via the Estates Returns Information Collection⁵ (ERIC), and this can be used to start to assess some areas of the carbon footprint, although there is not enough to give a full picture Scope 1, 2 and 3 detailed on page 2.

The data that is already collected is detailed below under separate headings, and forms the recommendations for outcome indicators. These are core requirements which would allow most of Scope 1 and 2 of the carbon footprint to be benchmarked, and are in line with regulators outside healthcare. As these are still limited, the report also recommends that a process measure is used to supplement this approach to demonstrate carbon reduction in wider areas.

The indicators proposed need to be benchmarked in order to make the results meaningful. Indeed the carbon footprint of an organisation is significantly influenced by its size, type of service, levels of activity and the age of its buildings.

1) *Building energy use*

Direct energy use in the NHS is currently collected via ERIC. The Vital Signs metric “NHS estates energy/carbon efficiency” provides NHS organisations with an opportunity to report the carbon efficiency of the NHS estate, although currently this information has not been benchmarked to show performance. This metric is currently only included in Tier 3 of the Vital Signs, and thus remains

⁵ ERIC data collection [Online] Available at: <http://www.hefs.ic.nhs.uk/> [Accessed 09/01/2009]



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voluntary for NHS organisations. Tier 1 and 2 of Vital Signs are mandatory and automatically considered by HCC/CQC in the assessment of NHS organisations. Discussions are taking place with the DH for future inclusion in Tier 2. Another option for the comparison of NHS organisations on carbon reduction would be for CQC to publish comparative data for Tier 3 Vital Signs.

This report recommends that the CQC consider publishing the vital signs metric that relates to carbon /energy efficiency regardless of its Tier

Trusts should be encouraged to sign up to this metric for building energy use. In addition this information will need to be categorised in order to facilitate benchmarking.

This report recommends that CQC publish the CO₂ emissions from building energy use as an indicator to assess NHS organisations. The Department of Health Estates and Facilities team will provide benchmarked information on an annual basis to support this assessment.

2) Waste

Waste data is collected via ERIC. The CO₂ emissions of waste corresponds to 1% of the NHS carbon footprint. However this only considers the emissions from waste disposal. Organisations who have significantly reduced their waste have reviewed the role of procurement to minimise waste from packaging and types of items purchased. Reviewing procurement decisions can reduce the whole lifecycle carbon impact of procured items, and the amount of waste that needs to be disposed of. Recycling has a much lower environmental impact, so reducing the amount of waste produced should be the primary aim.

Increasing recycling percentage requires better waste segregation in order to increase the volumes being recycled while also encouraging reductions in both clinical/hazardous and domestic waste.

This report recommends that CQC publish three indicators for waste to appraise NHS organisations:

- *weight of clinical/hazardous waste (target to decrease)*
- *weight of domestic waste (target to decrease)*
- *percentage recycling by volume (target to increase)*

The Department of Health Estates and Facilities team will provide benchmarked information on an annual basis to support this assessment.

3) Water

Water data is collected via ERIC. Water has an associated carbon cost in sourcing, pumping, heating and sewage treatment. The Department of Health has already investigated benchmarking of NHS organisations for efficient use of water.

This report recommends that CQC introduce water volume as an indicator to appraise NHS organisations. The Department of Health Estates and Facilities team will provide benchmarked information on an annual basis to support this appraisal.

4) Process indicator

Beyond the outcome indicators set out above for building energy, waste and water, performance could be assessed through a process indicator. This should be related to recognised guidance in this field.

The NHS Carbon Reduction Strategy identifies production of a Board Level Sustainable Development Management Plan (SDMP) as the starting point for action across an organisation. This would be supplemented by a detailed Sustainable Development Action Plan (SDAP) which would set out clear measurable milestones to monitor and reduce carbon emissions.



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For regulation purposes, progress made in developing a plan, the scope and quality of the plan could be included as process indicators for both provider and commissioning organisations. The SDAP could include many areas for carbon reduction including areas where no robust indicators with supporting data currently exist.

This report recommends that CQC introduce indicators for progress, scope and quality of the Sustainable Development Action Plan to appraise NHS organisations

5) Commissioning process

Commissioners who set performance standards based on the indicators for SDAP will be using their commissioning processes to establish the significance of this agenda. This should be a part of their duty to ensure that services are sustainable now and into the future.

This report recommends that PCTs use the metrics suggested in this report to set financial incentives for providers of services as a means of supporting targets for improvement.

6) Voluntary data collection

The collection of voluntary data for the indicators highlighted within the SDAP would enable a greater standardisation of the indicators and could form the basis for future data collection.

This report recommends that CQC consider using voluntary data for each of the indicators within the Sustainable Development Action Plan as part of their assessment process.

Impact

NHS organisations currently collect data for indicators on the CO₂ emissions of building energy use, waste volumes, the recycling percentage and water use volumes so including these indicators in the regulatory framework would not represent an additional data collection burden for NHS organisations. Further research by the DH is required in order to provide benchmark the data across different organisation types and sizes.

The process indicator would be part of a self assessment or self assurance process and could not be verified by DH centrally held data. This could be used by regulators alongside outcome measures in order to maximise the drive for more widespread carbon reduction processes. This data collection could also be used to collect voluntary information on the indicators to support the SDAP as listed in this report.

Recommendations

The NHS SDU recommends that the HCC share this report with CQC as part of their handover arrangements and that the following proposals are submitted:

- The CQC should work towards publishing the carbon reduction metric in Vital Signs regardless of its Tier allocation for benchmarking purposes
- The CQC immediately start assessing NHS organisations based on the outcome and process indicators provided in this report as part of the registration requirements, annual assessment and/or periodic review
- The CQC consider using NHS organisations self-reported performance against the process indicators for the Sustainable Development Action Plan (SDAP)
- The CQC annual assessments and reviews integrate new indicators for sustainability as these become available.



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- The CQC should consider using sustainable development and carbon reduction as the basis of a thematic review in order to facilitate the establishment of a baseline across all NHS organisations

These proposals would require the Department of Health to provide the data and benchmarking of building energy use, waste and water outcome measures on an annual basis to CQC.

In addition this report recommends that a common approach to sustainable development and carbon reduction indicators should be used in all healthcare regulation. This would ensure the administrative burden to Trusts is minimised and the use of available data is maximised pending the development of further indicators. This will require collaboration for further work and development across the DH, SDC, SDU and regulators (CQC, Audit Commission and Monitor) to ensure a robust outcome that supports organisations in taking this agenda forward.

Conclusion

This report sets out how healthcare regulation can play a key role in reducing carbon emissions for the NHS as demonstrated by other public sector regulators. Given the impact of climate change on the health of the population, metrics should be adopted for the health service to monitor its progress in reducing carbon emissions.

Responses to the consultation on the Carbon Reduction Strategy signalled a clear call for CQC measures and annual reviews to include carbon emissions reductions as part of the wider sustainable development strategy in the NHS.

Carbon emissions reductions can be introduced into regulation immediately through the inclusion of indicators detailed in this report. This can be further supplemented by process indicators which would highlight an organisation's broader commitment and progress on this agenda.

The indicators recommended are consistent with the Use of Natural Resources line of enquiry within the Audit Commission Use of Resources, applied to PCTs.

A further discussion paper which highlights the work required to develop metrics further will be published in Spring 2009.



Appendix 1 - Recommended indicators summary

Area	Indicator		
Building energy use	Benchmarked CO ₂ emissions from building energy use provided by DH based on ERIC data		
Waste	Benchmarked recycling percentage provided by DH based on ERIC data		
Water	Benchmarked water volume indicator based on ERIC data		
Sustainable Development Action Plan (SDAP) incorporating carbon reduction	Has a process been put in place to make progress against a SDAP?		
	Proposed scoring guide for above question could use three dimensions for assessing NHS organisations:		
	<p>Progress Is the SDAP agreed by partners⁶ and processes in place?</p> <p>1. Review has not taken place; no baseline or targets; implementation not started.</p> <p>2. Areas reviewed; baseline identified and targets agreed with some partners; implementation of SDAP started.</p> <p>3. Targets agreed with all partners and SDAP implemented</p> <p>4. Progress against agreed targets reported to board annually against SDAP</p>	<p>Scope Are all core areas⁷ covered?</p> <p>1. The SDAP includes targets for improvements for four or fewer of the areas listed</p> <p>2. The SDAP includes targets for improvements for five or six of the areas listed</p> <p>3. The SDAP includes targets for improvements for all the areas listed</p>	<p>Quality Does the SDAP deliver?</p> <p>1. Below agreed targets in most areas – inadequate performance.</p> <p>2. Only above agreed targets in some areas – adequate performance.</p> <p>3. Consistently above agreed targets – performing well.</p> <p>4. Well above agreed targets – performing strongly.</p>

⁶ Partners include:

1. Board(s) of provider organisations
2. Board(s) of commissioning organisations
3. SHA(s)
4. Local Authorities
5. Other strategic partners

⁷ SDAP core areas:

1. Assessment and progress through Good Corporate Citizenship model
2. Building energy use carbon footprint
3. Site/building carbon footprint provided on DECs and DEC advisory reports
4. Performance against BREEAM
5. Travel plan performance with reduction targets for all travel to NHS sites
6. Waste reduction in (domestic and clinical/hazardous) and recycling targets
7. Reduce water use through routine measuring, monitoring and reporting water use



Appendix 2 - Demonstrating performance - Sustainable Development Action Plan

Further indicators could be reported for NHS organisations, as part of the Sustainable Development Action Plan (SDAP). This would support the process indicator mentioned and demonstrate action on carbon reduction.

As part of NHS organisations' responsibility in providing a quality healthcare service it is essential that carbon reduction is targeted and reported annually to the trust board against their Sustainable Development Management Plan (SDMP). This will include an SDAP to help track targets in organisation indicators (below). Using these indicators can also help to catalyse action to reduce the broader carbon footprint.

Areas for consideration for the SDAP are listed below with appropriate indicators for NHS organisations to use to demonstrate performance:

1) Good Corporate Citizenship model

The NHS Carbon Reduction Strategy identifies Good Corporate Citizenship model⁸ (GCC) as one of many processes to reduce carbon emissions in the NHS. The GCC framework goes beyond carbon reduction but many of the areas it covers overlap with the areas listed here. The Good Corporate Citizenship model is currently voluntary for trusts and using its framework to form the basis of the SDAP is a good starting point for carbon reduction.

This report recommends that NHS organisations use the scoring system to set themselves targets to improve in each area of the Good Corporate Citizenship Model (GCC), the sections of GCC can be used as the basis for the Sustainable Development Action Plan

2) Travel

Organisation travel plans should include a review of:

- Business mileage, fleet and patient transport services
- Patient
- Visitor
- Staff travel

Targets should be set to reduce the carbon footprint of all these areas. Producing a travel plan in partnership (e.g. with Local Authorities and transport providers) can provide savings for trusts and more active travel also provides health benefits.

⁸ The Sustainable Development Commission, *Good Corporate Citizenship Assessment Model* [Online] Available at: www.corporatecitizen.nhs.uk [Accessed 07/01/2009]



Travel plan performance with reduction targets for all travel to NHS sites. Advice is available from:

- Health Technical Memorandum 07-03⁹
- Department of Health sustainable transport¹⁰
- Department of Transport travel plan guidance¹¹
- British Standard for travel plans PAS-500¹²

This report recommends that NHS organisations produce a travel plan which sets targets to reduce the CO₂ emissions from all travel for example by increasing:

- a. numbers walking
- b. numbers cycling
- c. multiple-occupancy car commuting percentage
- d. numbers using public transport

NHS organisations can already calculate the CO₂ emissions from business, fleet and patient transport using existing tools. Fuel use gives the most accurate CO₂ emissions information and can be sourced from fuel cards¹³. Alternatively NHS organisations can use the Carbon Trust footprint calculator¹⁴ or Defra conversion factors¹⁵

This report recommends that NHS organisations include business, fleet and patient transport and set targets to reduce the CO₂ emissions for these areas.

3) Procurement

NHS Purchasing and Supplied Agency (PASA) are starting to develop a *Procurement for Carbon Reduction guidance and roadmap*¹⁶ with key actions for NHS organisations to reduce their carbon footprint from procurement. Guidance also exists in *Procuring for Health and Sustainability 2012* –

⁹ Department of Health, 2006. Health Technical Memorandum 07-03: Transport management and car parking (HTM) London: HMSO

¹⁰ Department of Health *advice* [Online] Available at:
http://www.dh.gov.uk/en/Managingyourorganisation/Estatesandfacilitiesmanagement/Sustainabledevelopment/DH_4119604 [Accessed 03/03/2009]

¹¹ DfT travel plan guidance Available at:
<http://www.dft.gov.uk/pgr/sustainable/travelplans/work/> [Accessed 03/03/2009]

¹² British Standards Institute *PAS-500*:
<http://www.bsigroup.com/en/Shop/Publication-Detail/?pid=00000000030180397>
[Accessed 03/03/2009]

¹³ See for example *Arval's Monitorcard*:
<http://www.ogcbuyingsolutions.gov.uk/information/events/presentations/Jim%20Parkinson%20-%20Monitor%20Card.ppt>
[Accessed 20/02/2009]

¹⁴ Carbon Trust *Carbon footprint calculator* available at:
<http://www.carbontrust.co.uk/solutions/carbonfootprinting/FootprintCalculators.htm>
[Accessed 19/02/2009]

¹⁵ Defra *Conversion factors* available at:
<http://www.defra.gov.uk/environment/business/envrp/conversion-factors.htm>
[Accessed 19/02/2009]

¹⁶ PASA *Procurement for Carbon Reduction guidance and roadmap* – Under development by NHS PASA and NHS SDU



sustainable procurement action plan for the health and social care sector¹⁷ and the Flexible Framework¹⁸ to promote sustainability in procurement.

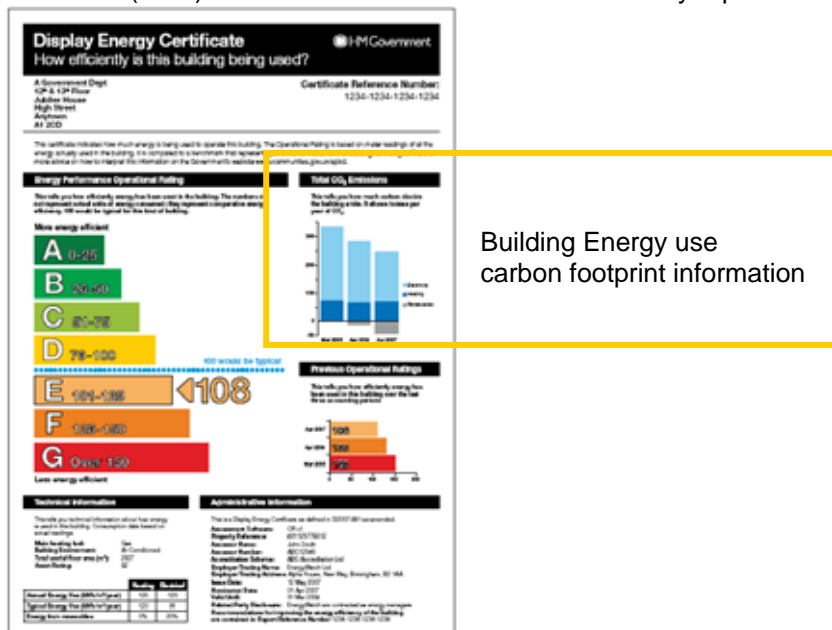
This report recommends that NHS organisations consider using the levels provided in the Flexible Framework to set targets to promote use of sustainable procurement.

Food provision is a complex area with many competing demands on it. These include carbon reduction, nutritional standards and value for money. The Cabinet Office Strategy unit have published 'Food Matters', starting the process of balancing these demands by establishing food standards for the public sector. The *Healthy Food Mark* is being developed to include environmental considerations and metrics will be developed in this area over the next 5 years.

4) Building energy use

Although an outcome indicator exists for building energy use process indicators provide coherent actions for improvement. Research has already taken place in establishing actions for reducing carbon from building energy use. The Carbon Trust management programme can also provide support for trusts to embed carbon reduction into NHS organisations.

NHS organisations already have information on the CO₂ emissions of buildings on the Display Energy Certificate (DEC)¹⁹. The DEC also comes with an advisory report



¹⁷ PASA Procuring for Health and Sustainability 2012 – sustainable procurement action plan for the health and social care sector [Online] Available at:

<http://www.pasa.nhs.uk/PASAWeb/NHSprocurement/Sustainabledevelopment/Procurement.htm>
[Accessed 19/02/2009]

¹⁸ Defra Flexible Framework [Online] Available at:

<http://www.pasa.nhs.uk/PASAWeb/NHSprocurement/Sustainabledevelopment/Procurement.htm>
[Accessed 19/02/2009]

¹⁹ Communities and Local Government Improving the energy efficiency of our buildings [Online] Available at:

<http://www.communities.gov.uk/documents/planningandbuilding/pdf/20.pdf>
[Accessed 23/01/2009]



This report recommends NHS organisations use the DECAs to identify building efficiency and set targets to reduce the CO₂ emissions using the DEC advisory report.

The CO₂ emissions of construction and buildings in use can be assessed using BREEAM: Healthcare²⁰. NHS organisations are expected to achieve at least the following standards:

- a. Excellent standard for new buildings
- b. Very Good standard for refurbishments
- c. Assessment against BREEAM: Healthcare (XB) for existing buildings

This report recommends NHS organisations exceed an Excellent rating using the BREAAM: Healthcare assessment for new builds and exceed Very Good for refurbishment.

5) Waste

Outcome indicators for waste can be supported by well established guidance from the DH on waste management²¹. This report recommends setting targets in line with this guidance.

6) Water

Outcome indicators for water can be supported by guidance from the DH on water management²². This report recommends setting targets in line with this guidance.

Reduce water use through routine measuring, monitoring and reporting water use. NHS organisations can develop information regarding the CO₂ emissions for their water use in conjunction with their local water company.

²⁰ Building Research Establishment's Environmental Assessment Method (BREEAM) Healthcare, 2002 [Online] Available at: <http://www.breeam.org/page.jsp?id=105> [Accessed 07/01/2009]

²¹ Department of Health, 2006. Health Technical Memorandum 07-01: Environment and sustainability: Safe management of healthcare waste (HTM)
London: HMSO

²² Department of Health, 2009. Health Technical Memorandum 07-04 Environment and sustainability: Water management and water efficiency – best practice advice for the healthcare sector (HTM)
London: HMSO



Appendix 3 - Glossary

ALE: The Auditors' Local Evaluation (ALE) assesses how well Primary Care Trusts (PCTs) and NHS Trusts manage and obtain value for money from their financial resources. ALE was introduced in 2005/06

BREEAM: The BREEAM family of standards, assessment methods and tools are all designed to help construction professionals understand and mitigate the environmental impacts of the developments they design and build.

CAA: Comprehensive Area Assessment provides independent assessment of the prospects for local areas and the quality of life for people living there. It assesses and reports how well public money is spent and will ensure that local public bodies are accountable for their quality and impact.

Carbon: Throughout this strategy the word carbon is used to as a generic term for CO₂.

Carbon Literacy: General knowledge or awareness of the concepts, causes, and the effects of atmospheric pollution or greenhouse gases.

CO₂: Carbon dioxide is the most prevalent greenhouse gas. CO₂ emissions result from the combustion of fuel, from land use changes and from some industrial processes.

CQC: Care Quality Commission

DEC: Display Energy Certificate

DH: Department of Health

Direct Carbon Emissions: These emissions are synonymous with energy use from buildings. Most commonly, direct emissions will result from combustion of fuels which produce CO₂ emissions, for example the gas used to provide hot water for the workspace. In addition, some organisations will directly emit other greenhouse gases. For example, the manufacture of some chemicals produces methane (CH₄) and the use of fertiliser leads to nitrous oxide (N₂O) emissions.

ERIC: Estates Return Information Collection completed annually by all NHS Trusts and PCTs.

GCC: Good Corporate Citizenship describes how NHS organisations can embrace sustainable development and tackle health inequalities through their day-to-day activities. The Sustainable Development Commission has developed a self assessment model that will help organisations to identify and assess their contribution to good corporate citizenship.

KLOE: Key Line of Enquiry for Audit Commission assessment

PASA: NHS Purchasing and Supply Agency

PCT: Primary Care Trust

SDMP: Sustainable Development Management Plan sets out clear measurable milestones to measure, monitor and reduce direct carbon emissions.

SDAP: Sustainable Development Action Plan details actions required to support the management plan (SDMP).

VFM: Value for Money

WCC: World Class Commissioning framework



Appendix 4 - References

Arval's Monitorcard:

<http://www.ogcbuyingsolutions.gov.uk/information/events/presentations/Jim%20Parkinson%20-%20Monitor%20Card.ppt>

[Accessed 20/02/2009]

British Standards Institute PAS-500:

<http://www.bsigroup.com/en/Shop/Publication-Detail/?pid=00000000030180397>

[Accessed 03/03/2009]

Building Research Establishment's Environmental Assessment Method (BREEAM) Healthcare, 2002 [Online] Available at: <http://www.breeam.org/page.jsp?id=105> [Accessed 07/01/2009]

Carbon Trust *Carbon footprint calculator* available at:

<http://www.carbontrust.co.uk/solutions/carbonfootprinting/FootprintCalculators.htm>

[Accessed 19/02/2009]

Carbon Trust www.carbontrust.co.uk

<http://www.carbontrust.co.uk/carbon/publicsector/nhs/>

Climate Change Act 2008. (c.27), London: HMSO

Communities and Local Government Improving the energy efficiency of our buildings [Online] Available at:

<http://www.communities.gov.uk/documents/planningandbuilding/pdf/20.pdf>

[Accessed 23/01/2009]

Defra *Conversion factors* available at:

<http://www.defra.gov.uk/environment/business/envrp/conversion-factors.htm>

[Accessed 19/02/2009]

Defra *Flexible Framework* [Online] Available at:

<http://www.pasa.nhs.uk/PASAWeb/NHSprocurement/Sustainabledevelopment/Procurement.htm>

[Accessed 19/02/2009]

DfT travel plan guidance Available at:

<http://www.dft.gov.uk/pgr/sustainable/travelplans/work/> [Accessed 03/03/2009]

Department of Health, 2006. Health Technical Memorandum 07-01: Environment and sustainability: Safe management of healthcare waste (HTM)
London: HMSO

Department of Health, 2006. Health Technical Memorandum 07-03: Transport management and car parking (HTM) London: HMSO

Department of Health, 2009. Health Technical Memorandum 07-04 Environment and sustainability: Water management and water efficiency – best practice advice for the healthcare sector (HTM)
London: HMSO

Department of Health *advice* [Online] Available at:

http://www.dh.gov.uk/en/Managingyourorganisation/Estatesandfacilitiesmanagement/Sustainabledevelopment/DH_4119604 [Accessed 03/03/2009]



ERIC data 2007/08 [Online] Available at:
http://www.dh.gov.uk/en/Managingyourorganisation/Estatesandfacilitiesmanagement/Propertymanagement/DH_4117912 [Accessed 21/01/ 2009]

ERIC *data collection* [Online] Available at: <http://www.hefs.ic.nhs.uk/> [Accessed 09/01/2009]

GHG Protocol *Corporate Standard* [Online] Available at: <http://www.ghgprotocol.org/> [Accessed 02/03/2009]

PASA *Procurement for Carbon Reduction guidance and roadmap – Under development by NHS PASA and NHS SDU*

PASA *Procuring for Health and Sustainability 2012 – sustainable procurement action plan for the health and social care sector* [Online] Available at:
<http://www.pasa.nhs.uk/PASAWeb/NHSprocurement/Sustainabledevelopment/Procurement.htm>
[Accessed 19/02/2009]

SOGE *Targets* [Online] Available at: http://www.ogc.gov.uk/sustainability_soge_targets.asp
[Accessed 20/02/2009]

The Sustainable Development Commission, *Good Corporate Citizenship Assessment Model* [Online] Available at: www.corporatecitizen.nhs.uk [Accessed 07/01/2009]

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