

EXECUTIVE SUMMARY
REPORT TO THE COUNCIL OF GOVERNORS
6 MAY 2014

Subject:	Sustainable Development Programme Annual Report
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Status¹	To note

PURPOSE OF THE REPORT:

- Provides a summary of progress over the last year on the following:
 - Carbon emissions and energy reductions
 - Estate rationalisation
 - Travel
 - Waste management.
- Updates the position on Sustainable Development Leadership

KEY POINTS:

- The Trust will achieve the 2015 NHS carbon reduction target given current performance trends continue.
- Targets post 2015 will be met by continuation of the existing measures along with other measures which enable healthcare services to be provided which reflect low carbon patient pathways. The majority of the existing measures, in particular estate rationalisation, will compliment such initiatives

IMPLICATIONS

	Aim of the STHFT Corporate Strategy 2012-2017	Tick as Appropriate
1	Deliver the best clinical outcomes	✓
2	Provide Patient Centred Care	✓
3	Employ Caring and Cared for Staff	✓
4	Spend Public Money Wisely	✓
5	Deliver Excellent Research, Education & Innovation	

RECOMMENDATION(S):

- The Council of Governors is asked to note and comment on the report.

APPROVAL PROCESS

Meeting	Presented by	Approved	Date
TEG	HC	Y	12.2.14
HGC	HC	Y	17.2.14
Council of Governors	HC		6.5.14

¹ Status: A = Approval
 A* = Approval & Requiring Board Approval
 D = Debate
 N = Note

HEALTHCARE GOVERNANCE COMMITTEE – 17 FEBRUARY 2014

ANNUAL REPORT ON THE SUSTAINABLE DEVELOPMENT PROGRAMME

1. INTRODUCTION

The previous report was presented to the Healthcare Governance Committee at the meeting held in February 2013.

This paper provides a summary of the progress over the last year and focuses on the following key headings:

- Carbon emissions and energy reductions:
 - Emissions trends
 - Update on the principle carbon and energy reductions schemes
 - Future energy strategy
- Estate rationalisation
- Travel
- Waste
- Sustainable Development Leadership

Conclusions are provided in section 7.

2. CARBON EMISSIONS AND ENERGY REDUCTIONS

2.1 Emissions trends

Emissions due to gas consumption:

2007/08 Annual Carbon Dioxide Emissions (tco ₂) = 26,647
2008/09 Annual Carbon Dioxide Emissions (tco ₂) = 29,834
2009/10 Annual Carbon Dioxide Emissions (tco ₂) = 27,677
2010/11 Annual Carbon Dioxide Emissions (tco ₂) = 24,660
2011/12 Annual Carbon Dioxide Emissions (tco ₂) = 19,071
2012/13 Annual Carbon Dioxide Emissions (tco ₂) = 20,962

Emissions due to electricity consumption:

2007/08 Annual Carbon Dioxide Emissions (tco ₂) = 35,133
2008/09 Annual Carbon Dioxide Emissions (tco ₂) = 36,171
2009/10 Annual Carbon Dioxide Emissions (tco ₂) = 34,712
2010/11 Annual Carbon Dioxide Emissions (tco ₂) = 32,005
2011/12 Annual Carbon Dioxide Emissions (tco ₂) = 30,038
2012/13 Annual Carbon Dioxide Emissions (tco ₂) = 29,061

The predicated outturn for 13/14 is expected to provide a reduction on the total 2012/13 emissions.

2.2 Update on the principle carbon and energy reductions schemes

The Trust has invested in the following measures to reduce emissions and energy consumption:

- **Replacement of power transformers at the Royal Hallamshire and Northern General Hospitals:** Replacement was necessary due to the age of the existing equipment and an increasing trend of failures. This provided an ideal opportunity for energy savings. The old transformers are being replaced with new high efficiency transformers which provide the facility to enable voltage reduction. Savings of between 6-10% are achieved by doing this. Further transformers have been replaced in 13/14. The programme will be complete in 14/15.
- **Upgrading of the Food Central Processing Unit at the Northern General Hospital:** The unit was refurbished and came into full production during 13/14. Systems have been installed which recover heat from refrigeration equipment and use this for heating incoming water for washing and space heating. In addition, the old steam system used for heating has been replaced by high efficiency gas condensing boilers which has enabled the decommissioning of the steam and condensate pipes which run from the boiler house to the central processing unit. Disconnection of these pipes has reduced standing heat losses and also maintenance.
- **Conversion of lighting systems to high efficient/low energy LED (light emitting diodes) light fittings:** The following areas have been converted: All corridors in Brearley, Firth, Huntsman and Chesterman. The Nurses Home, M&SRC, Vickers Front Hall, Histopathology and Jessop Wing. Ward areas recently refurbished have been refitted with LED lighting. These schemes improve lighting levels, reduce energy consumption by typically 85%, reduce maintenance and also heat gains.
- **Northern General Hospital - Conversion of the steam infrastructure to low temperature hot water:** This involves replacing the existing steam systems (used for providing space heating and water heating) with a low temperature hot water system. The benefits of which are: reduced boiler house losses and distribution system losses, reduced backlog and maintenance, infrastructure modernisation and improved hygiene of domestic hot water systems.

A low temperature hot water system also provides opportunities for the Trust to consider other low carbon technologies and hence maximises strategic opportunity and energy resilience whilst reducing energy cost and carbon emissions.

The Trust had already commenced this programme of works when in early 2013 the Department of Health awarded the Trust a £3M contribution to the project. This has enabled acceleration of the programme which means saving benefits will be realised sooner than initially thought. Resources during 13/14 have focused on completing this project in a timely manner.

The following buildings will be supplied from the new low temperature hot water system from April 2014:

- Brearley
- Robert Hadfield
- Day Surgery Unit
- Osborne
- Huntsman
- Firth
- Chesterman
- Vickers 1, 2 &3
- Critical Care
- Renal Unit

Other non-clinical non-critical buildings (such as office accommodation) will be supplied by stand-alone gas fired installations.

On completion of the conversion emissions will be reduced by a further 4200 tonnes of CO₂ per year.

- **Northern General Hospital - Laundry Gas Supply:** An energy review of the current laundering arrangements was carried out in 12/13. The review found that significant energy saving could be made by using direct fired gas laundry equipment and since most of the laundry equipment was becoming due for replacement this presented an ideal opportunity to purchase new gas fired equipment. Furthermore, this also aligns with the site energy strategy to phase out the use of steam at the Northern General site.

During 12/13 CIT approved funding to enable the installation of a gas supply into the laundry and also the replacement of a number of driers.

The cost to install the gas supply into the laundry was £250K. It is estimated the return on investment will be within 5 years and will provide a further reduction of around 305 tonnes of CO₂ per year.

2.3 Future energy strategy:

- **Leadership:** There is an active energy management group within Estates which is led by the Estates Director. The group meet on a monthly basis to review all aspects of emissions and energy consumption. A new management structure within estates becomes effective in February 2014. The new structure is intended to strengthen energy management across the Trust which will result in further reductions in emissions and energy consumption.
- **New capital developments and major refurbishments:** Such schemes provide consequential improvements in terms of energy and emissions reductions as a basic requirement.
- **Royal Hallamshire Hospital:** The main hospital generators are reaching a point where replacement will be necessary within three years. In addition, the main chillers on the roof of the hospital, which provide cooling for the ventilation systems, are also reaching the end of their service life.

Over time, the steam system at the site has gradually been converted to low temperature hot water in a number of areas. The pending issues relating to replacement of generators and chillers provide a significant opportunity to review the energy strategy for the site.

To arrive at the future strategy the following will be evaluated:

- Completion of the conversion from steam to low temperature hot water.
- Heat recovery measures capable of reducing the amount of heat used by ventilation systems.
- Alternative means of providing more efficient cooling for the ventilation systems (heat pumps, DX coolers, etc).
- Connection onto the district heating system.
- CHP (combined heat and power) opportunities.

The evaluation process will be completed during 14/15.

- **Northern General Hospital:** On completion of the conversion to low temperature hot water the following opportunities will be evaluated:
 - Further condensing boilers.
 - CHP (combined heat and power).
 - Bio fuel boilers.
 - Connection onto the waste heat installation currently under construction at Wincobank (the EON power station adjacent to the M1).

3. ESTATE RATIONALISATION

The Trust's Corporate Strategy embodies an Estate Strategy which sets out the following objective:

To reduce the overall size of the estate, improve space utilisation to deliver financial and carbon savings to create a more sustainable organisation.

Reducing the estate will:

- Reduce running costs and backlog liabilities.
- Reduce carbon emissions. Less estate will reduce carbon emissions resulting from the buildings, travel and procurement activities.
- Increase the sustainability of the Trusts service provision.
- Act as a change agent/driver/enabler for service change.
- Be difficult and require culture change in how space is regarded and used.

During 13/14 an Estate Rationalisation Group was established under the leadership of the Director of Finance. The key objective of the Group is to progress short to medium term opportunities to reduce the estate. The group meets on a regular basis and reports to the Capital Investment Team.

Headline progress to date is as follows:

- The principles and the requirement for estate rationalisation have been reiterated in the business planning guidance for 14/15. All directorates have been assigned a 2.5% space reduction target. Space reduction proposals emerging from the business for 14/15 and beyond, will be developed into schemes where there are clear strategic benefits.
- A review has taken place of all leased premises. A number of leases will be terminated during 14/15 providing full year savings of £350K.
- Works are in progress to demolish old building stock on the NGH campus. A number of demolitions have already taken place during 13/14 and others are planned in 14/15. Buildings which have been demolished or pending demolition are: Immunology, PHL, Diabetes and Endocrine and the Rivermead Respite Unit.

Demolitions planned in 14/15 are: Chesterman House, Wycliffe House, OPD4, CF OPD, Sorby 1&2 and a number of other smaller buildings around the site. The above demolitions equate to around 1.1% of the total estate.

- Hotel Services have undertaken a review of all residential properties with view to rationalisation which will enable further estate reduction during 14/15.

4. TRAVEL

The Trust Travel Plan outlines a number of measures which provide sustainable travel opportunities for our patients, visitors and staff by encouraging car sharing, use of public transport, cycling and walking with a key emphasis on reducing single occupancy car travel to the hospital sites.

Further to the 2012 Sustainable Travel and Travel Plan Report, new initiatives have been introduced and a number of initiatives which were outlined last year continue to be progressed:

- The Bicycle User Group has a membership of over 800 cyclists.
- Bike Doctor Clinics continue to be held.
- The Bike Boost Challenge has resulted in 195 loans of bikes to date which then gives the individual the option to buy the bike through the I-Choose Scheme.
- The I-Choose a Bicycle Scheme continues to be successful and 815 bikes have been acquired since the schemes introduction in March 2009.
- New secure cycle shelters and additional cycle stands have been installed at both campuses which now provide secure parking for almost 400 bikes.

Public Transport

- The Trust H1 shuttle bus service continues to provide a valuable link between Northern /Central campuses and continues to grow in its popularity. In 2012 two new vehicles with greater capacity and Euro 5 standard engines were introduced. The service has also been extended and runs every day (Monday-Friday) excluding Bank Holidays from 0600 to 1800. A facility has been introduced which provides an automated voice announcement to staff via an elected telephone number to alert staff when the H1 service is suspended, for example due to inclement weather.
- A new electronic minibus by the League of Friends and with wheelchair access, operates on the Northern Campus and links with the H1 service at the Clocktower terminal.
- In June and July 2013 Trust staff were invited to take part in the Travel Trial Club which was linked to the Bus Boost Initiative. Staff were offered a 28 day Travelmaster ticket free of charge which allowed them to use any bus, tram or train in South Yorkshire. 258 members participated.

Car Journeys

- The Liftshare web site has been extended and now asks if members have a 4x4 vehicle which can be used to assist colleagues in adverse conditions.
- Temporary parking permits have been introduced to assist staff who usually travel by other sustainable modes of transport, for ad-hoc journeys.

Other Initiatives

- The in-house transport system has introduced a fleet management system which has improved fuel economy, provides more accurate route planning with the ability to respond to last minute changes, traffic conditions and driving style/efficiency.
- A campus link has been introduced which offers a timetabled taxi service transferring non-patient items between the hospital sites with a reduction of ad-hoc journeys.
- Sustainable travel is now an integral part of the Trust Induction programme delivered to around 1,000 new employees during 2013.
- The Trust is involved in the Sheffield Move More Project which is a “whole city” approach to increasing physical activity in all ages, all abilities and all parts of Sheffield. Other partners include the Voluntary Sector, Sheffield University, Sheffield Hallam University, Local Authority Sheffield Chamber of Commerce and Sheffield International Venues (SIV).

5. WASTE

- The Trust continues to segregate waste and has separate collections for comingled recycling waste, baled cardboard, batteries, aerosols, scrap metal and waste electrical and electronic equipment (WEEE) to ensure compliance and to optimise financial savings wherever possible. Ward waste is also monitored via eCAT toolkit.
- Work is on-going to introduce a segregation strategy for lower risk tiger stripe offensive healthcare waste from the orange sack infectious clinical waste stream which will result in reduced quantities of hazardous waste being generated and will divert waste from an expensive clinical waste treatment disposal route at present. A steering group has been developed which includes the Trust Infection Control and Microbiology representatives, to take this initiative forward.
- Reusable sharps containers continue to reduce the tonnage of waste incinerated; each reusable container used has the potential to eliminate 500 single use sharps containers from the clinical waste incineration disposal route.
- A quick 12 point audit tool has also been developed to monitor waste segregation and collection arrangements which include site walk-about audits.
- We are presently out to tender for the Trust waste contract with an expected commencement date of April 2014.
- The Trust Waste Management Policy is presently being reviewed to take cognisance of waste legislation and Department of Health (DH) best practice guidance (HTM 07-01).
- Waste performance continues to be reported annually to DH via the Estates Return Information Collection (ERIC).

- The Trust has achieved good landfill diversion performance.

STHFT 2012/13	Waste Recycling Volume Tonnes	High Temp Disposal Waste Tonnes	Non-Own Treatment (alternative treatment plan) Tonnes	Landfill Disposal Waste Tonnes	Waste, Electrical and Electronic Equipment (WEEE) Tonnes
	2,716,3050	182.6280	1,343.0180	331.6640	47.1360
STHFT 2012/13	Total Waste Cost	Occupied floor area (m²)	£(m²)		
	£1,164,358	£396,954	£2.93		

NOTE – It is not possible to provide previous years comparative data as the questions changed in 2012/13.

Source – ERIC 2012/13.

6. SUSTAINABLE DEVELOPMENT LEADERSHIP

A full time Sustainable Development Manager (SDM) was appointed in 2009 and left the Trust in August 2012 after 12 months Maternity leave. In the meantime, significant progress has been made by Estates and Hotel Services.

The Trust Executive Group gave a commitment to review the position on this post annually.

The position remains largely unchanged and is reiterated as follows:

- The post was undoubtedly of value and addressed a number of needs at the time; however future progress needs to be cross-cutting across clinical front line services. As such, it is unclear how such a post could be effectively integrated into front line clinical services, especially given the diversity and complexity of the organisation as well as the very significant organisational pressure in these areas.
- Sustainability in the areas of energy, travel and waste are already being sufficiently addressed by the respective directorates. An incoming SDM would add no value to the current established arrangements.
- Given the austere environment it is difficult to justify this position on the grounds of either affordability or the availability of a robust organisational model for impacting on the carbon footprint of clinical services.

7. CONCLUSIONS

- The report herewith sets out progress to date and whilst the profile of sustainability within the Trust has reduced, significant progress has continued within Estates and Hotel Services.
- The sustainability audit report issued in February 2013 stated:

“The Trust has made very good progress towards achieving its sustainability targets. It is ahead of other neighbouring Foundations Trusts in the progress it has made and the systems it has established”
- The NHS targets are as follows: A reduction in total emissions by 10% by 2015 (using a baseline in 2007), 34% by 2020, 64% by 2030 and 80% by 2050.
- In terms of emissions relating to energy consumption, the Trust will meet the target requirements of the NHS Carbon Reductions Strategy for England (NHS SDU 2009) for 2015.
- To meet the targets post 2015 will require the continuation of current measures along with other service change initiatives which enable healthcare services to be provided in a low carbon environment. There is a need for ongoing research, development and training into low carbon patient pathways and methodologies. Technology enablers clearly offer solutions and these need to be developed and exploited to meet future targets.

REFERENCES:

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