

Sustainability performance 2012-2013

Environmental Management System

The Museums Environmental Management System (EMS) has been successfully recertified to the international standard ISO 14001 by UKAS accredited external auditors, demonstrating continual improvement in environmental management across the estate, employees and operations.

Employee engagement

The Museum works with employees to promote environmental best practice, including this year, working with partner organisations to deliver a range of awareness raising events and information services, such as Climate Week, Walk to Work Week, Dr Bike and internal communication through staff notices and intranet.

Strategic sustainability plans

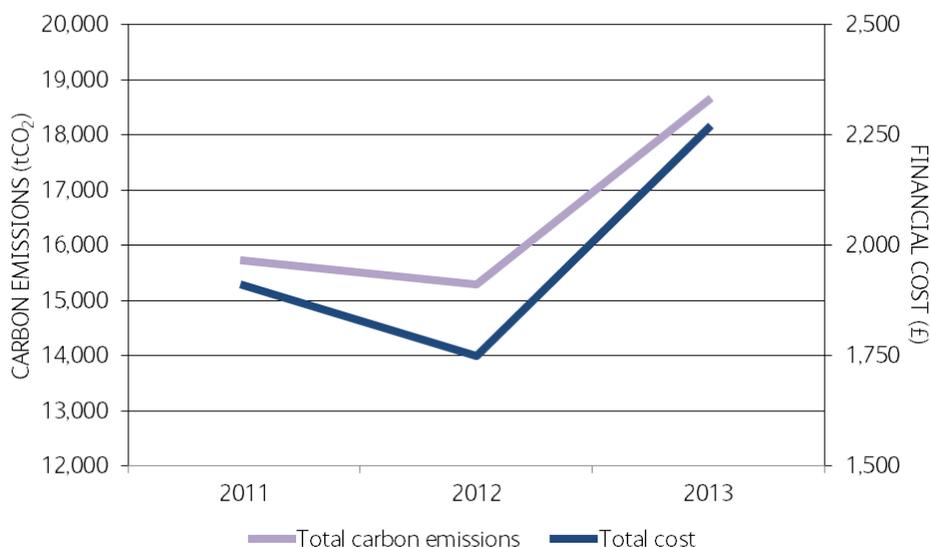
The scope of the Museums Sustainability Programme has been defined to focus on the aspiration to operate sustainably across the Museum. This will be delivered through the Museums Corporate Services Executive Board, supported by the Environmental Group.

Environmental Group

An Environmental Group, consisting of senior managers from across the organisation, has been established to support a coherent approach to sustainability. The Environmental Group will contribute to continual improvement of the Museums environmental performance by developing environmental policies, supporting delivery of the EMS and other sustainability projects, identifying opportunities for development and communicating environmental objectives and actions at departmental level.

GREENHOUSE GAS EMISSIONS			2011	2012	2013
Non-financial indicators (tCO ₂)	Total		15,723	15,301	18,628
	Electricity		6,245	5,989	8,515
	Gas		9,477	9,312	10,114
Energy consumption (MWh)	Electricity	Total	24,702	24,739	28,442
		CHP (on-site)	12,911	13,422	12,819
		Imported	11,792	11,317	15,622
	Gas		49,881	50,251	53,229
Financial indicators (£k)	Total		1,909	1,750	2,266
	Electricity		1,220	1,080	1,098
	Gas		690	635	1,021
	Carbon trading		-	36	147

GREENHOUSE GAS EMISSIONS



PERFORMANCE COMMENTARY

Total energy consumption has increased in 2013, due to increases in both imported electricity and gas. Tonnes of carbon dioxide (CO₂) emissions have therefore also increased in 2013, to 18,628 tonnes or 20 %. (CO₂ emissions were calculated using the CRC method, i.e imported electricity and CHP generated electricity are assumed to generate the same carbon emissions per tonne). All financial indicators have increased in line with increased consumption and inflated further by gas prices. Carbon trading data includes both the scheme allowance charges and the associated subscription, administration and audit costs.

DIRECT IMPACTS COMMENTARY

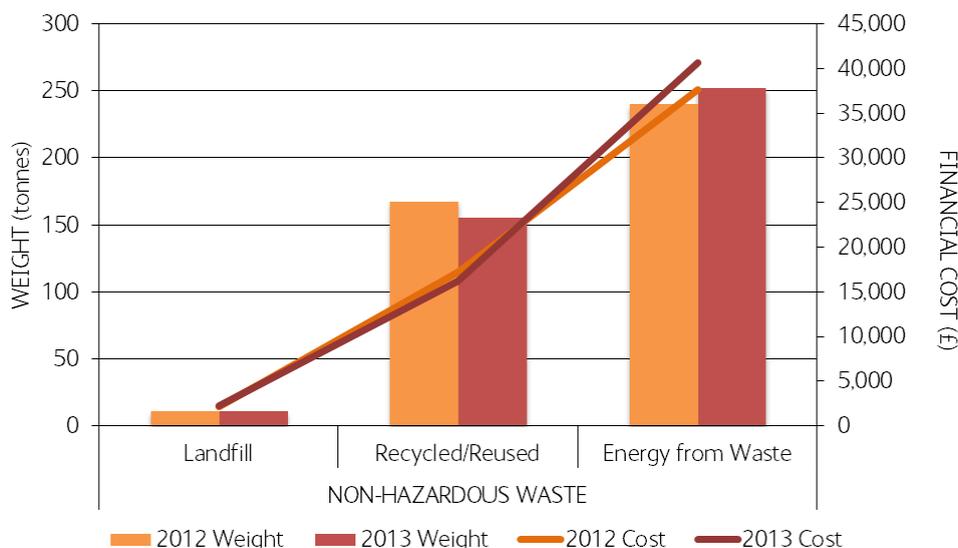
The main Museum site at South Kensington has become more intensive over the past years, with an increase in visitor numbers and services. New science facilities and public galleries have opened, contributing to an increase in energy consumption and associated greenhouse gas emissions. Plant and equipment across the Museum is upgraded as it is replaced. Gas consumption is reported to the EU under the Emissions Trading Scheme regulations and other forms of energy use are reported to the Environment Agency under the CRC Energy Efficiency Scheme, both are legally binding schemes, which the NHM must participate in due to the magnitude of energy consumed.

OVERVIEW OF INDIRECT IMPACTS

Meeting the demanding targets that have been set as a result of the CRM will rely heavily on Central Government meeting its own objectives in terms of renewable energy generation, energy efficiency and decarbonisation of the National Grid.

WASTE MANAGEMENT AND MINIMISATION			2012	2013
Non-financial indicators (tonnes)	Total waste		419	419
	Non-hazardous	Landfill	11	11
		Recycled/Reused	168	156
		Energy from Waste	240	252
	Hazardous waste		7	6
Financial indicators (£)	Total waste		57,002	59,168
	Non-hazardous	Landfill	2,149	2,288
		Recycled/Reused	17,226	16,245
		Energy from Waste	37,627	40,666
	Hazardous waste		10,881	7,209

WASTE MANAGEMENT AND MINIMISATION



PERFORMANCE COMMENTARY

While the current waste stream maximises efficiency through collaboration with the Science Museum, recycling and generating energy from waste where possible, no specific reduction targets have been set. We aim to have this in place in the next waste management contract commencing in mid-2013. Small amounts of waste are sent to landfill from the Tring Museum, via the Dacorum Borough Council waste management agreement.

Total waste has remained consistent between 2012 and 2013; however there has been a change in the disposal route of this waste. The 12 tonne increase in waste disposed of as Energy from Waste and a reduction in waste being recycled/reused (while only representing 3% of total waste) indicates poor performance and future targets should aim for a year on year increase in reuse and recycling in accordance with waste hierarchy.

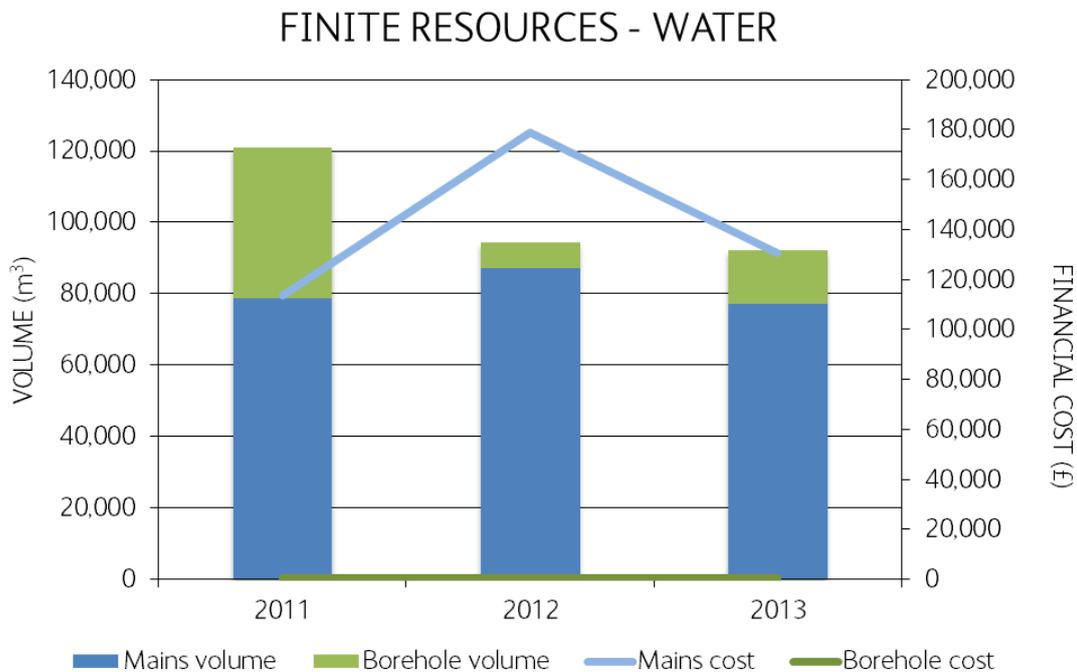
DIRECT IMPACTS COMMENTARY

The Museum’s direct waste impacts include waste generated by on-site catering facilities, development of exhibitions and office based activities. The Museum provides recycling facilities for a large number of office materials, as well as working with suppliers on take back schemes for specialist equipment and packaging. Also, to a limited extent, equipment reuse is encouraged by utilising Museum networks to donate redundant equipment to other organisations. The existing waste management contractor and onsite facilities are being reviewed in conjunction with the Science Museum and facilities management contractors to implement a range of improvement measures designed to increase recycling rates. This will include segregation of food waste, estimated at 50 tonnes per year.

OVERVIEW OF INDIRECT IMPACTS

Indirect waste impacts include waste generated by visitors, contractors and suppliers. Internal visitor waste facilities were reviewed in 2012 and recycling facilities were installed in public areas. The Museum works with contractors and suppliers to encourage waste minimisation and effective waste management.

FINITE RESOURCES – WATER		2011	2012	2013
Non-financial indicators (m3)	Total water consumption	120,933	94,170	91,980
	Mains water	78,642	87,210	77,257
	Borehole abstraction	42,291	6,960	14,723
Financial indicators (£)	Total	113,931	179,133	131,319
	Mains water and wastewater	113,511	178,713	130,739
	Borehole abstraction	420	420	580



PERFORMANCE COMMENTARY

Mains water use has been higher than expected in 2012/13 due to breakdown of the borehole sensor severely limiting abstraction between April and July 2012 and again in February 2013. Repairs have now been completed and we expect borehole abstraction to be maximised within the abstraction licence limits to minimise mains water consumption at the South Kensington site. No specific reduction targets have been set.

DIRECT IMPACTS COMMENTARY

Abstraction of water from the on-site borehole significantly reduces mains water consumption and costs. This non-potable water supply is used for 'grey water' services across the South Kensington site. The abstraction licence has been renewed (new licence valid from 01/04/2013 until 31/03/2025) to the same maximum volumes of abstraction. The abstraction licence limits can be reviewed in future in line with changes to water use and visitor numbers if necessary.

The Museum has worked with Thames Water to deliver water efficiency awareness sessions that were open to all staff.

OVERVIEW OF INDIRECT IMPACTS

The indirect impacts on water consumption include the influence of visitor water use. Due to reconsideration of the estate Masterplan last year, the feasibility study regarding installation of a green roof on approximately 1,050 m² of roof area was suspended between July 2012 and February 2013, however it has now been reinstated. While not inherently minimising water consumption, the study will consider potential for the installation of rainwater harvesting and successful implementation will reduce surface runoff.

BIODIVERSITY		2013
PERFORMANCE COMMENTARY		
South Kensington	<p>General grounds maintenance at South Kensington is undertaken by the facilities management contractor. No formal biodiversity enhancing practices are included in the maintenance schedule. Over the next two years a coherent redesign of the South Kensington grounds will be completed. This will include consideration of sustainable drainage and positive biodiversity solutions, as detailed in the Supplementary Planning Document.</p> <p>The on-site wildlife garden is managed in accordance with the Wildlife Garden Management Plan 2010-15, which includes ongoing biodiversity development and monitoring activities.</p>	
Tring	<p>General grounds maintenance at Tring is undertaken by a grounds maintenance contractor. No formal biodiversity enhancing practices are included in this maintenance schedule.</p> <p>Plans to develop part of the meadow into a shared car parking facility for the Museum and the neighbouring Tring Park (Woodland Trust) are underway. A maintenance plan for the remaining part of the meadow will be put in place and will address issues of maintaining and enhancing biodiversity.</p>	
Wandsworth	<p>There is limited external space at Wandsworth. This is managed by the facilities management contractor. No biodiversity practices are included in this maintenance schedule.</p>	

SUSTAINABLE PROCUREMENT		2013
PERFORMANCE COMMENTARY		
<p>Current sustainable procurement practices include evaluating new suppliers and contractors on environmental considerations during the tender process, centralising services across the organisation and with neighbours, and rationalising deliveries to help reduce local congestion (and associated issues such as air quality) where possible.</p> <p>The Museum works continually with suppliers to improve the environmental information related to services and products, with an aim of effectively recording, monitoring and reducing the associated environmental impacts.</p> <p>In 2012-13, the Museum has benefitted from EU funded procurement consultancy delivered through WRAP, providing expert information and advice on specialist procurement areas. The European Pathway to Zero Waste (EPOW) targeted assistance programme provided improvements to the Museums procurement policy, staff guidance and waste management, uniform and exhibition design contracts. The improvements focussed on implementing the waste hierarchy throughout procurement processes to reduce overall waste generation. The Resource Efficient Facilities Management programme provided the Museum with expert advice regarding improving resource efficiency through the delivery of catering, waste management and hard and soft facilities management services. This advice is being incorporated in to future procurement exercises and contracts.</p> <p>We will continue to implement the above practices and to develop improvements in relationships with and performance of contractors and suppliers.</p>		