

## Sustainability performance 2013-2014

### Environmental Management System

The Museum's Environmental Management System (EMS) has successfully retained certification 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, Bike Week, Dr Bike and internal communication through staff notices and intranet.

The Museum has engaged with the National Union of Students and signed up to the Green Impact scheme. The scheme promotes sustainable behaviour change - through the completion of online workbooks by staff - across the organisation. Green Impact will be launched at the Museum in autumn 2014-15, with the aim of improving environmental performance and engaging staff on a range of sustainability issues.

### Environmental Group

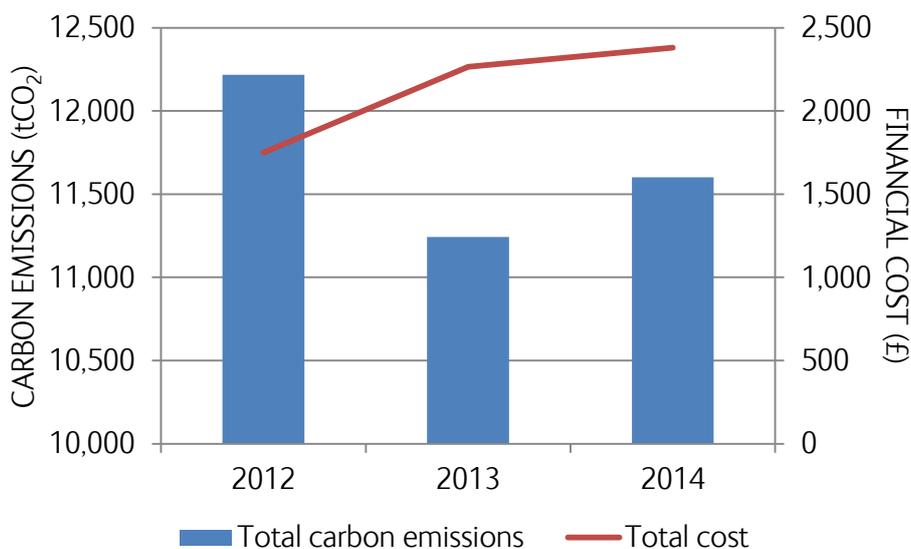
An Environmental Group, consisting of senior managers from all areas of Museum business, was established to support a coherent approach to sustainability. The Environmental Group was formed to contribute to continual improvement of the Museums environmental performance by developing environmental policies, supporting delivery of the EMS and identifying opportunities for continual development through specific projects and initiatives.

The Environmental Group met eight times in 2013-14 and has supported environmental initiatives across the organisation in addition to developing environmental policies within key areas including ICT, temporary exhibitions, travel and disposal of non-collections items.

## Sustainability Report 2013-2014

GREENHOUSE GAS EMISSIONS		2012	2013	2014	
Non-financial indicators (tCO <sub>2</sub> )	Total	12,217	11,242	11,601	
	Electricity	2,604	1,686	1,204	
	Gas	9,613	9,556	10,398	
	Business travel	-	-	482	
Energy consumption (MWh)	Electricity	Total	30,342	27,853	29,280
		CHP (on-site)	12,791	12,385	13,540
		Imported	17,551	15,468	15,740
	Gas	50,862	50,563	54,746	
Financial indicators (£k)	Total	1,750	2,266	2,705	
	Electricity	1,080	1,098	1,143	
	Gas	635	1,021	1,118	
	Carbon trading	36	147	137*	
	Business travel	-	-	324	

### GREENHOUSE GAS EMISSIONS



### PERFORMANCE COMMENTARY

NOTE: The presentation of utility data has been simplified so that current and previous years' emission figures are based on total gas burned on site (reportable under the Emissions Trading Scheme, ETS) and total power imported from the grid (reportable under the Carbon Reduction Commitment, CRC), whereas figures had previously been based solely on CRC methodology. Likewise, emissions from on-site generation (i.e. CHP) are included in the gas data. The new approach will ensure consistency of reporting in future. The total electricity and gas consumption and costs increased marginally in 2013/14 with a corresponding increase of 3% in emissions of carbon dioxide.

2014 is the first year that emissions from business travel have been included in this data, now available from the Museum's travel management company, capturing the majority of air and rail journeys completed by staff during 2014. Business travel represents 3% of total CO<sub>2</sub> emissions and 12% of financial cost.

\* Carbon trading costs are currently estimated for 2014; finalised figures will be available in September.

### 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 the opening of public galleries. However, plant and equipment across the Museum is upgraded as it is replaced to improve efficiency. CHP output has been improved as a result of ring main management in 2013. This has contributed to a reduction in imported electricity and the Museum is now below the threshold for inclusion in CRC Phase 2 (1 April 2014 to 31 March 2019).

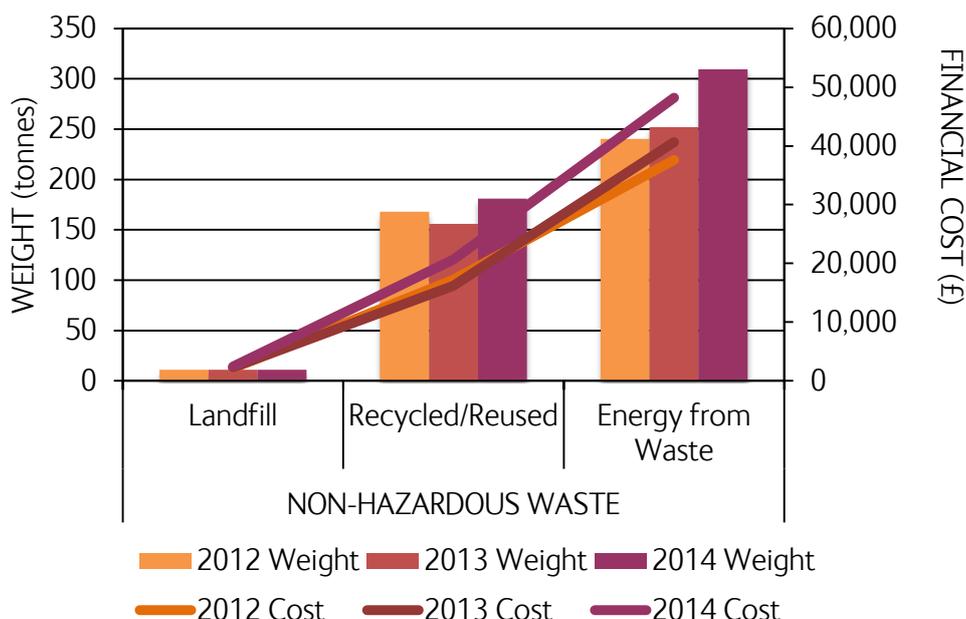
Gas consumption is reported to the EU under the Emissions Trading Scheme regulations, a legally binding scheme, which the NHM must participate in due to the magnitude of energy consumed.

### OVERVIEW OF INDIRECT IMPACTS

Meeting the demanding targets that have been set as a result of the Carbon Reduction Master plan 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	2014
Non-financial indicators (tonnes)	Total waste		426	424	507
	Non-hazardous	Landfill	11	11	11
		Recycled/Reused	168	156	181
		Energy from Waste	240	252	309
Hazardous waste		7	6	6	
Financial indicators (£)	Total waste		57,002	59,168	77,647
	Non-hazardous	Landfill	2,149	2,288	2,425
		Recycled/Reused	17,226	16,245	20,628
		Energy from Waste	37,627	40,666	48,210
Hazardous waste		10,881	7,209	6,384	

**WASTE MANAGEMENT AND MINIMISATION**



**PERFORMANCE COMMENTARY**

Overall tonnage of waste and associated financial indicators has increased in 2014. The 88 tonne increase can be attributed to the increase in recycled/reused (30% of the increase) and energy from waste (69%) categories. This increase includes 36 tonnes of waste disposed of via skips to an ‘energy from waste’ facility, which was not included in previous data. The introduction of a collection for green waste materials during key periods of the year (autumn leaf fall and spring pruning) has contributed to the increase in recycled/reused figures. Hazardous waste has remained consistent across the three years.

Small amounts of waste are sent to landfill from the Tring Museum, via the Dacorum Borough Council waste management agreement for general waste only. The increase in the number of recyclable waste streams collected by the waste management contractors at Tring (from paper and card only, to now include plastic bottles, metal cans and glass) is expected to increase the volume of waste recycled in the 2015.

**DIRECT IMPACTS COMMENTARY**

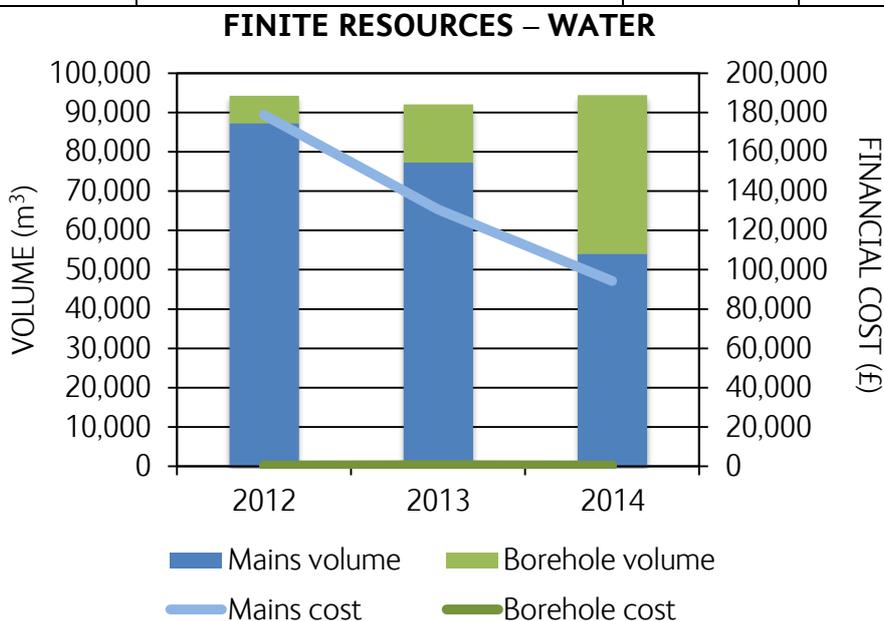
The Museum’s direct waste impacts include waste generated by on-site catering facilities, development of exhibitions and office based activities. The Museum provides recycling facilities for a large number of office materials, as well as working with suppliers on take back schemes for specialist equipment and packaging. Previously unwanted equipment was disposed of via other organisations on an ad hoc basis. Following the development of a formal disposal policy for non-collections items that fall outside of the scope of the normal waste streams, it is expected resale and donation of items will increase.

The existing waste management contract and onsite facilities were reviewed in conjunction with the Science Museum and facilities management contractors. A range of improvement measures designed to increase recycling rates are being implemented, including increased segregation of waste streams (food, garden and offensive waste) and increased staff training and communications.

**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		2012	2013	2014
Non-financial indicators (m <sup>3</sup> )	Total water consumption	94,170	91,980	94,348
	Mains water	87,210	77,257	53,982
	Borehole abstraction	6,960	14,723	40,366
Financial indicators (£)	Total	179,133	131,319	94,755
	Mains water and wastewater	178,713	130,739	94,285
	Borehole abstraction	420	580	470



**PERFORMANCE COMMENTARY**

The completion of repairs to the borehole has enabled a significant increase in the volume of water abstracted, 40,366m<sup>3</sup> (80% of the abstraction licence volume). This has resulted in a decrease in consumption of mains water at the South Kensington site.

Despite a small increase in water rates, costs have decreased due to the significant reduction in consumption of mains water and associated wastewater services. Abstraction of water from the borehole remains a very cost effective way of providing water services to the Museum.

**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 limits can be reviewed in future in line with changes to water use and visitor numbers if necessary.

The Museum has signed up to take part in a Thames Water ‘water efficiency’ scheme. The organisation will complete a water audit in 2015, to identify opportunities for improving water efficiency across the South Kensington site.

**OVERVIEW OF INDIRECT IMPACTS**

The indirect impacts on water consumption include the influence of visitor water use. The Grounds Development Programme will consider sustainable drainage options and irrigation as part of the redesign of the South Kensington grounds (see Biodiversity).

<b>BIODIVERSITY</b>		<b>2014</b>
<b>PERFORMANCE COMMENTARY</b>		
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. Following an architectural competition, a designer has been selected to work with the Museum over the next year to produce a coherent redesign of the South Kensington grounds. This will include consideration of sustainable drainage and positive biodiversity solutions, as detailed in the Supplementary Planning Document. 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>Part of the meadow has been developed into a shared car parking facility for the Museum and the neighbouring Tring Park (Woodland Trust). A maintenance plan for the remaining part of the meadow has been put in place and will address issues of maintaining and enhancing biodiversity.</p>	
Wandsworth	<p>There is limited external (and no planted) space at Wandsworth, managed by the facilities management contractor. No biodiversity practices are included in this maintenance schedule.</p>	

<b>SUSTAINABLE PROCUREMENT</b>		<b>2014</b>
<b>PERFORMANCE COMMENTARY</b>		
<p>Current sustainable procurement practices include evaluating new suppliers and contractors on environmental considerations during the tender process, centralising services across the organisation and utilising framework agreements where possible.</p> <p>In 2012-13, the Museum benefitted from EU funded procurement consultancy delivered through WRAP, providing expert information and advice on specialist procurement areas through the European Pathway to Zero Waste (EPOW) and Resource Efficient Facilities Management programmes. In 2013-14, following completion of the programmes, three case studies have been produced by external organisations, detailing the Museum's progress and improvements in our procurement processes.</p> <p>An internal Procurement Awareness training session, to be delivered quarterly in 2014 by the Environmental and Sustainability Officer and Procurement Team has been developed. The bite size workshop will provide information on procurement law, sustainable procurement, NHM policy and process and the importance of considering Best Value when procuring works, goods or services on behalf of the Museum.</p> <p>The Museum has agreed funding from our Facilities Management providers for the implementation of BS8903: Principles and framework for procuring sustainably. Following final approval by Executive Board, the Museum will work with Action Sustainability to align the Museum's processes with the framework during 2014-15.</p>		