

GREATER MANCHESTER FIRE AND RESCUE AUTHORITY

AUTHORITY MEETING

8 SEPTEMBER 2011

Subject: ANNUAL SUSTAINABILITY UPDATE 2010/11

Report of the County Fire Officer & Chief Executive

## SUMMARY

This report outlines the Authority's key achievements through the sustainability programmes over the financial year 2010/11. Also provided is a summary of the key highlights since the last update and the economic and carbon savings achieved through delivering the Authority's strategy. It identifies savings of £3.55 million to be achieved through utility and fuel cost avoidance, arising from investment in sustainability.

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## BACKGROUND

1. Members will recall from previous updates that international and national policy clearly sets out the legislative drive to reduce greenhouse gas emissions. In addition, the current backdrop of public sector spending reductions and fiscal restraint reinforce the economic benefits of a proactive approach to sustainability.
2. Since the last annual update, the Service has been publicly recognised as a national leader in the field of sustainability, and presented with three prestigious national awards for sustainability activities, alongside organisations such as Marks and Spencer's, The Co-operative Group, and E.ON.
3. The 5-year sustainability strategy endorsed by the Authority in October 2010 is being delivered and has been incorporated into directorate plans. In addition to reducing our impact upon the environment, the strategy targets cost avoidance of **£3.55 million** by 2015.

## LOCAL CONTEXT

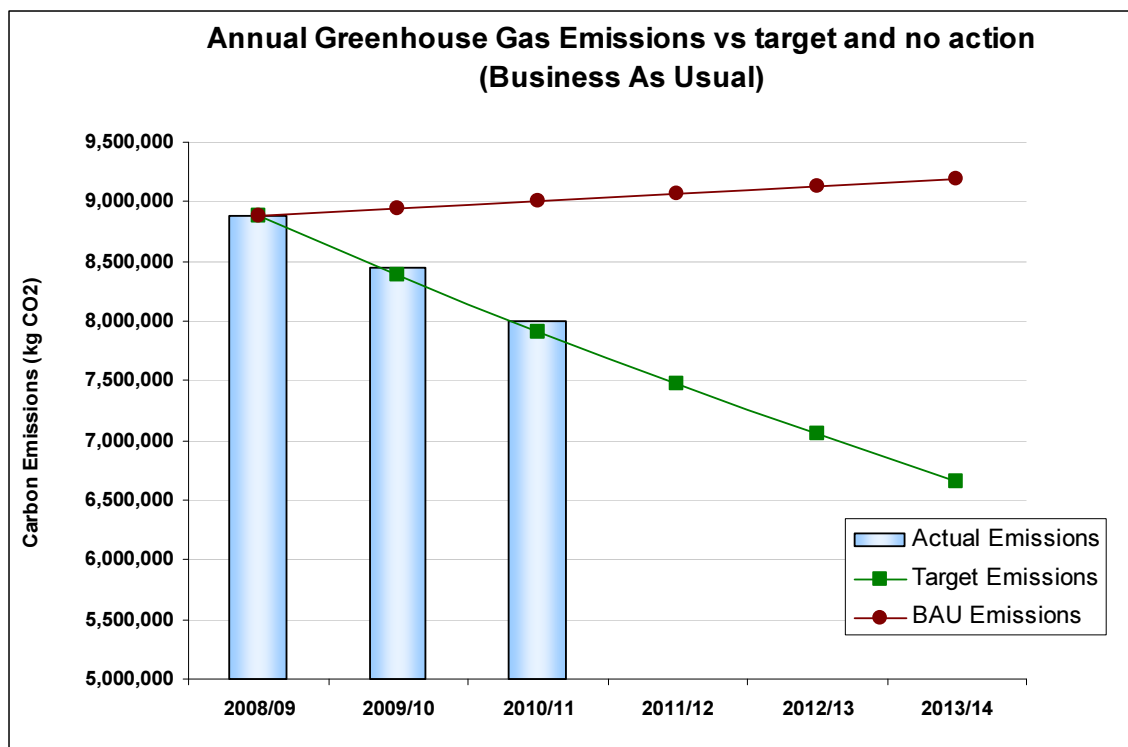
4. Previous updates have described the local policy developments which influence and inform the Authority's approach to sustainability. All ten metropolitan councils of Greater Manchester now have individual climate change plans approved or in development, and work is underway through the Manchester Environment Commission to bring these together into a combined Greater Manchester Climate Strategy.

5. The AGMA 2011 Climate Strategy was submitted for final approval on July 29th, with a series of actions to be developed up to 2014. The strategy sets out four goals to be achieved by 2020:
  - A rapid transition to a low carbon economy
  - Collective carbon emissions reduced by 30-50%
  - Preparation and active adaptation to a rapidly changing climate
  - ‘Carbon literacy’ embedded into the culture of our organisations, lifestyles and behaviours.
  
6. Our sustainability strategy is complementary to the wider Greater Manchester Strategy goals. Members are requested to note that we continue to work closely with the Environment Commission and other regional partners to deliver our three agreed aims of:
  - Reducing our carbon footprint
  - Adapting to climate change
  - Promoting sustainable behaviours, both within our organisation and in the communities that we serve.
  
7. Through effective collaboration we will make our city region more sustainable and unlock the significant economic growth opportunities, estimated to be approximately £20 billion by 2020.
  
8. The Director of Finance and Technical Services represents the Authority on the Chief Officers Group which supports the Environment Commission.

**PROGRESS TO DATE**

9. The graph that follows shows the overall reduction in greenhouse gas emissions from electricity, gas, fuel, waste and water for the year 2010/11 versus the previous two years.

<b><u>Year</u></b>	<b><u>Actual Emissions (kg)</u></b>	<b><u>BAU Emissions (kg)</u></b>	<b><u>Target (kg)</u></b>
<b>2008/09</b>	8,880,369	8,880,369	8,880,369
<b>2009/10</b>	8,444,471	8,942,532	8,383,068
<b>2010/11</b>	8,002,119	9,005,129	7,913,616



10. The vast majority of these greenhouse gas emissions are from electricity, gas and diesel usage, and breakdown as follows:

<i>Emissions Source</i>			
<u>Year</u>	<u>Diesel (kg)</u>	<u>Electricity (kg)</u>	<u>Gas (kg)</u>
<b>2008/09</b>	2,165,082	3,480,824	3,123,242
<b>2009/10</b>	2,043,523	3,471,787	2,867,331
<b>2010/11</b>	1,772,633	3,156,648	3,013,089

## 2010/11 SUSTAINABILITY PERFORMANCE

### **2010/11 Electricity**

11. Electricity usage has reduced by 9.1% compared to 2009/10. This is a significant reduction in consumption year on year, exceeding our target of 5.6%. This achievement reflects the Authority's targeted support of capital investment to improve electricity usage efficiency during 2010/11, including voltage optimisation systems at 15 of our highest energy-consuming sites and retrofit projects across the estate.
12. The total cost savings achieved over 2010/11 through reductions in electricity consumption (compared to taking no action) are approximately £150,000, and it is anticipated meeting our 25% target will avoid more than £730,000 in utility costs by 2015.

## Electricity ⚡

**Target:** **5.6%** ↓ reduction in consumption

**Actual:** **9.1%** ↓ reduction in consumption

**£148,363**



2010/11 saving in electricity costs,  
compared to taking no action

### 2010/11 Diesel

13. Diesel usage has reduced by 13.3% compared to the previous year. This significant reduction in consumption may be attributable to a number of factors, including a reduced number of incidents, fuel efficient policies and investments in fuel efficient/energy saving technologies and driver training.
14. The Authority's comprehensive approach to sustainable travel and fleet management has received considerable external praise, including winning a prestigious national award; the Business in the Community 'Example of Excellence'.



15. The total cost savings achieved over 2010/11 through this reduction in diesel consumption (compared to taking no action) are more than £300,000, and it is anticipated that meeting our 25% target for diesel will avoid fuel costs of more than £1.5 million by 2015.

## Diesel

**Target: 5.6%**  reduction in consumption

**Actual: 13.3%**  reduction in consumption

**£319,405**



2010/11 saving in diesel costs,  
compared to taking no action

## 2010/11 Gas

16. Gas usage shows a 4.8% increase versus the previous year. Gas usage is seasonal and part of the increase may be attributable to a cold snap in December, however the Authority is not currently on target to meet a 25% reduction in gas use by 2015.
17. For 2011/12 gas consumption will be prioritised and addressed through development of an energy policy, alongside staff engagement and potentially capital investment where payback periods are identified as acceptable.
18. Authority Members are requested to note that the costs avoided by meeting the 25% reduction target in gas use are anticipated to reach over £1 million by 2015.

## Gas

**Target: 5.6%**  reduction in consumption

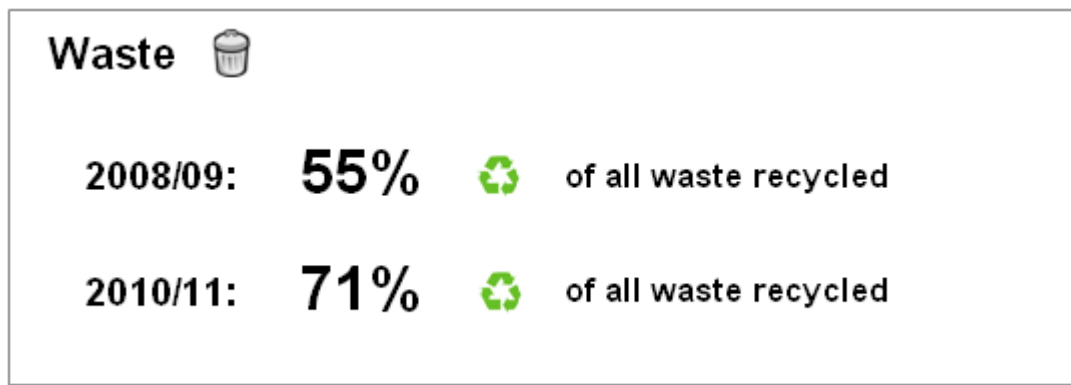
**Actual: 4.8%**  increase in consumption

## 2010/11 Waste and Water

19. Producing waste and using water in Authority buildings accounts for a much smaller proportion of our carbon footprint compared to gas,

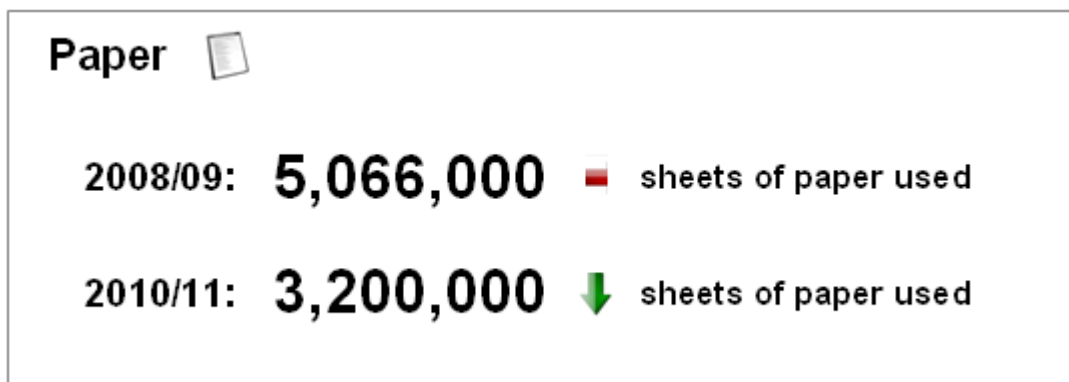
electricity and diesel, but each still result in an avoidable cost and environmental impact.

20. The latest figures show that recycling rates across the Service have now increased from 55% to more than 70%. The agreed target for 2015 is to recycle 75% of all waste. In order to improve our performance in this area to reach the last 5%, weekly and quarterly checks are now carried out by staff 'Environmental Champion' volunteers to ensure that all recyclable waste is segregated wherever possible.
21. Water consumption in Authority buildings has reduced year-on-year, but it should be noted that much of our water use is unbilled consumption during training and incident response. This has a significant environmental impact and embedded carbon footprint, which will be revealed in more detail in further updates through the Appliance, Flow Meter and Telemetry project (AFLOAT).



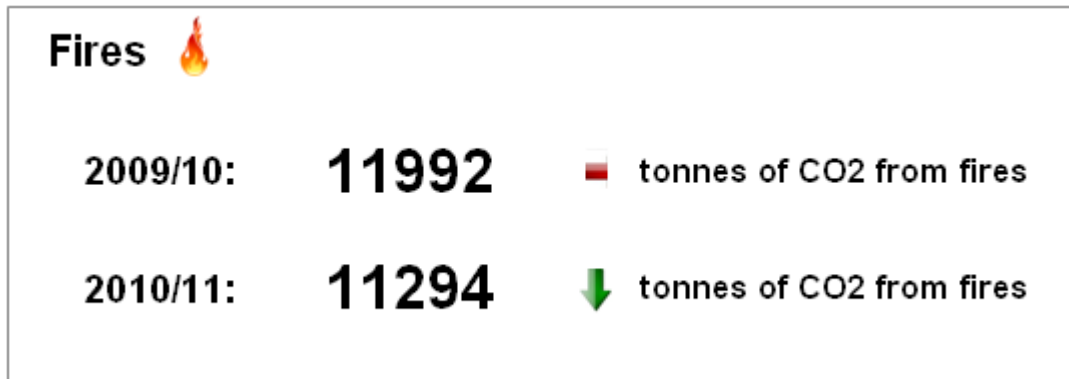
#### 2010/11 Paper Use

22. The Authority now uses 1.8 million fewer sheets of paper per year, compared to our first year of measuring in 2008/09. This is a 37% reduction, and represents a significant reduction in the Authority's indirect carbon footprint.



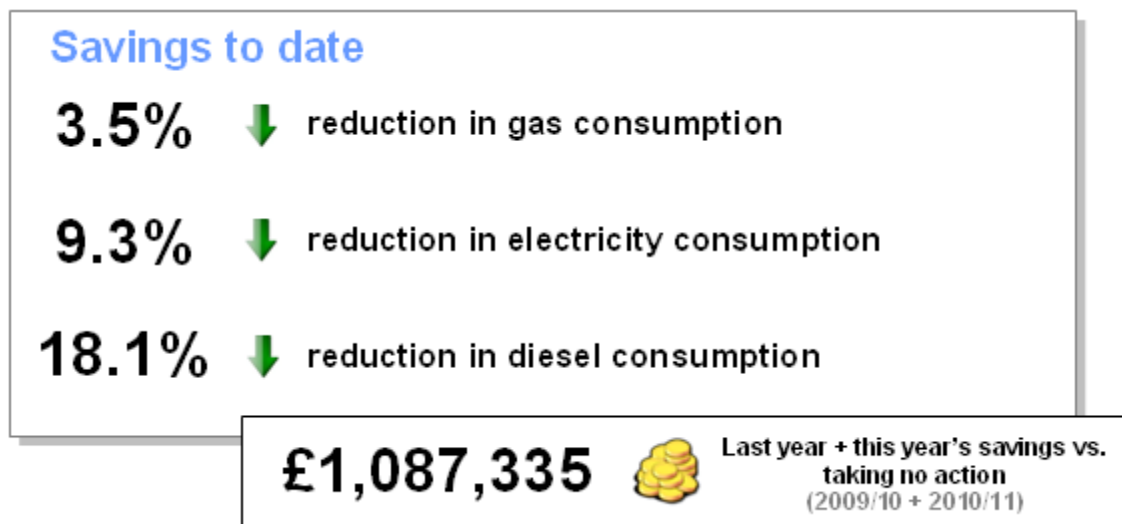
#### 2010/11 Carbon Footprint from Fires

- 23. Members will recall from previous updates that the Authority is undertaking world-leading research to calculate the carbon footprint of fires in the built environment.
- 24. This research has allowed us to demonstrate the considerable environmental benefit of the Authority's focus on fire prevention and associated decline in incidents. Over the past year alone, the reduced number of fires corresponds to a reduction in Greater Manchester's carbon footprint of almost 700 tonnes.



OVERALL PERFORMANCE TO DATE (2008-2011)

- 25. By comparing the predicted resource use (if no action was taken) to the actual measured cost and consumption to date, we can show the value of the Authority's sustainability strategy.



## Projected value

25%



reduction in all consumption by 2014

£3,554,145



Savings to date + future savings  
vs. taking no action  
(to 2015)

*Note that this could be considered a conservative estimate, over the last ten years utility costs have increased by around 300% and indications for 2011/12 are for a 25% increase on the previous year.*

### KEY PROJECTS OVER 2011/12

26. **Green Hose Awards** – As part of the ongoing Recognition and Reward review, and continuing the Authority's award-winning success in sustainable behaviour initiatives, the Green Hose Awards will be an internal competition which has been developed by our Environmental Champions to promote and celebrate the best environmental practice across the Service. This low-cost initiative will allow benchmarking and league-tabling of stations, and help to drive local efficiency and accountability to reduce resource consumption by up to 10%.
27. To support innovation and efficiency, all staff will be invited to propose cost-saving sustainability initiatives to a panel of judges from across the Authority, and the most promising ideas will be considered for implementation within the asset management program.



28. **Environmental Management** – Members will recall that the Authority was the first public sector organisation in the country to achieve the British Standard for Environmental Management (BS8555: Phase 3) at all sites, demonstrating a commitment to effectively manage our environmental risks and ever-increasing legal obligations.
29. Over 2011/12 the Service will implement the internationally recognised Environmental Management System (ISO14001). This independently-assessed system will provide even greater scrutiny and governance of our key environmental risks, and ensure that we maximise the economic and environmental benefits of delivering the Authority's strategy.





30. **Energy Policy** – To build on the successful work to date in reducing electricity consumption, and to avoid significant costs in gas usage (saving more than £1 million by 2015), the Service will develop an energy policy over 2011/12. The focus of the energy policy will be heating and cooling provision. When supported with staff engagement, energy policies have been demonstrated by organisations such as the Environment Agency to reduce gas consumption by up to 35%.
31. **Green Travel Plan** – The Authority is now recognised as a national leader on sustainable fleet management, which stands us in good stead to meet the challenge of rapidly rising fuel costs. To further support our staff and reduce our direct and indirect carbon footprint, a range of ‘green travel’ measures are under consideration. An independent ‘green fleet review’ from the Energy Saving Trust has identified potential savings of up to 320 tonnes of CO2 emissions per year.
32. **Sustainable Procurement** – Whilst the Service has made significant reductions in direct resource consumption and associated CO2 emissions, other Fire and Rescue Authorities have taken the initiative to embed sustainability throughout their procurement and supply chain, demonstrating further cost and environmental benefits.
33. Over 2011/12 we plan to develop and implement a robust Sustainable Procurement Strategy for the Authority, utilising best practice from around the world.

## RISKS

34. Price increases may result in increased year-on-year spend for electricity, gas and/or diesel. Over the last ten years utility costs have increased by around 300% and indications for 2011/12 are for a 25% increase on the previous year. Whilst utility and fuel costs may vary, it remains certain that continued reduction in resource consumption to meet the agreed 25% target is a significant cost saving compared to taking no action.
35. Members will recall the Sustainability Reporting and Sustainability Update to the Policy Committee of March 12<sup>th</sup> 2009. Points 15 to 17 of this update detailed the Carbon Reduction Commitment (CRC); a mandatory carbon trading scheme for all organisations whose annual half-hourly metered electricity usage exceeded 6,000 MWh per year.
36. Since 2009, the Authority’s level of electricity consumption has remained under this threshold value, exempting us from full participation in the scheme.

37. On 30 June 2011 the UK Government announced a set of proposals to amend and simplify the CRC scheme. These proposals will be formally consulted on in early 2012, but will likely result in a change to the threshold for participation. Members should note that the Authority may be required to participate in the CRC from 2012/13 onwards, and the likely associated costs will be reflected in further updates following the UK Government consultation. This risk is currently being tracked on the F & TS directorate risk register.

### RECOMMENDATIONS

38. Members are requested to note:
- The achievement of a 1000 tonne saving in CO2 emissions and cost savings of more than £700,000 for 2010/11, compared to taking no action (business as usual).
  - The peer-assessed recognition of Greater Manchester Fire and Rescue Authority as a national leader on sustainability.
  - The key sustainability projects planned for 2011/12 in order to remain on target for a 25% reduction in resource consumption and a £3.5 million cost avoidance saving in associated costs by 2015.

STEVE McGUIRK  
COUNTY FIRE OFFICER  
& CHIEF EXECUTIVE

There are no background papers to this report within the meaning of Section 100D of the Local Government Act 1972.

S. McGuirk  
(Proper Officer)  
4.8.11