

Hampshire Fire and Rescue Authority

Finance and General Purposes Committee

Item 7

14 January 2011

Reducing our impact on the environment : progress report

Report by the Chief Officer

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1 Summary

1.1 Good progress is being made on improving our environmental performance and preparing the Service for the impacts of climate change. An Environmental Management System will soon provide a clear framework for all our environmental improvement activities. However, targets for reducing our carbon footprint will not be met without continuing investment. Escalating energy and fuel prices will place considerable financial burdens on the Service unless we invest in energy reduction projects in the short-term. Financial investment and commitment of the whole organisation will be required to accelerate our progress and allow us to meet our environmental responsibilities.

2 Recommendations

- 2.1 That the Authority's corporate objective and target for introducing an Environmental Management System be amended as follows:
"As part of a regional partnership we will introduce a Service-wide Environmental Management System in 2011 and work towards gaining independent accreditation of the system [International Standard Organisation (ISO)14001] by the end of 2012."
- 2.2 That when setting budgets for buildings maintenance, the Committee is mindful of the need to ensure sufficient funding to rectify any potential areas of non-compliance that could be revealed during the implementation of the Environmental Management System.
- 2.3 That when setting medium-term financial strategies, the Committee is mindful of the strong financial drivers for investing in the energy and water efficiency of our buildings to gain longer-term benefits.
- 2.4 That the Authority applies to join the Local Authority Carbon Management Programme to benefit from the Programme's range of support services and the structure it provides for all our carbon management activities.
- 2.5 That the proposal to establish a network of 'Environmental Champions' across the Service be endorsed; and that the Committee nominates a lead member to help promote carbon reduction activities.

3 Introduction and background

3.1 The Authority has three priority targets in its corporate plan:

- Reduce the effect fires and other incidents have on the environment by 10% by 2012 (from 2008).
- Reduce our carbon footprint by 20% by 2012 (from 2006).
- Achieve the British standard for environmental management (ISO 14001) by 2010. (This will test that all our procedures for reducing the effect our activities have on the environment are working well).

3.2 In September 2009 the Authority signed the “Nottingham Declaration on Climate Change” and committed to:

- Participate in local and regional networks for support.
- Within the next two years develop plans with our partners and local communities to progressively address the causes and the impacts of climate change, according to our local priorities, securing maximum benefit for our communities.
- Publicly declare, within appropriate plans and strategies, the commitment to achieve a significant reduction of greenhouse gas emissions from our own operations especially: energy sourcing and use, travel and transport, waste production and disposal and the purchasing of goods and services.
- Assess the risk associated with climate change and the implications for our services and our communities and adapt accordingly.

3.3 This report focuses on progress and makes recommendations for further action in the second and third target areas of the corporate plan and in relation to the Nottingham Declaration.

4 Environmental Management System (ISO14001)

4.1 By introducing an environmental management system (EMS) the Service will have a framework for testing and continually improving our procedures for reducing the negative effect of our activities on the environment. ISO14001 is the British and International Standard for environmental management systems.

4.2 The Service originally began to develop its own EMS to meet the requirements of ISO14001 by the end of 2010. In 2009 a decision was taken by the South East Regional Management Board (RMB) that its environment work stream would pursue the implementation of a EMS for the South East region as a whole. By working in partnership it was accepted that economies of scale and cost-savings would be achieved. Peer support and useful benchmarking would also be possible.

4.3 Using funding from the South East Fire Improvement Partnership (SEFIP) the Service’s EMS development work is currently being used as the basis for development of the regional EMS. The SEFIP funding provides the support of expert EMS consultants to work with representatives from each fire and rescue service to complete the EMS development. The result will be a framework which each service can implement to suit its own circumstances. Some training for the introduction of the

EMS will also be provided as part of the consultants work. The completed EMS framework (which will satisfy ISO14001) is expected to be ready for implementation by March 2011. Each service will decide for itself how it will implement the system and whether it wants to seek ISO14001 accreditation. The SEFIP funding does not extend to implementation and accreditation costs.

- 4.4 This regional partnership work represents best practice. So when the EMS framework is complete it could be offered more widely to other fire and rescue authorities. However working in partnership can be a slow process and this has led to the 2010 target date being missed.
- 4.5 One of the main purposes of an EMS is to provide systems that check organisations' levels of compliance with all environmental legislation. Ensuring legal compliance reduces the likelihood of costly and damaging prosecution. But experience from other organisations indicates that it is most likely that some investment will be required to ensure all our sites are legally compliant. It makes sense to rectify any major areas of non-compliance before seeking formal external certification to ISO14001. Given the uncertainties involved it is reasonable to recommend extending our accreditation target date to the end of 2012.
- 4.6 It is proposed that a small multidisciplinary working group will work under the direction of the Environmental Impact Project Coordinator to implement the EMS. Specific roles will be defined and the working group will report back on progress and identify the resources required to achieve accreditation.

5 Adaptation to climate change

- 5.1 This is about making planned changes to our buildings, and operations to allow us to be better prepared for the climatic changes predicted for Hampshire.
- 5.2 As part of our commitment under the "Nottingham Declaration", the Service has completed a risk based assessment of vulnerabilities to weather and climate both now and in the future. This was done using a tool developed by Hampshire County Council (HCC) with the support of the Hampshire Local Authority Area (LAA) Partnership. The assessment will be regularly reviewed and used to develop both an entry for the Strategic Risk Register and a long term action plan for adaptation to climate change. A further report on identified risks and the adaptation action plan will be provided in due course. These will help to inform the Authority on both the revenue budget and capital programme implications.
- 5.3 The risk assessments of organisations from across the LAA and members of the Public Sector Sustainable Development Group (PSSDG) will be collated by HCC. This will identify risk areas in which organisations would benefit from working together. By working in partnership and using a common tool the assessments can be more readily compared and will help to identify the scope for a coordinated set of adaptations to climate change.
- 5.4 In his capacity as our representative on the Hampshire Local Resilience Forum (LRF), our Director of Service Delivery will ask the LRF to consider climate change adaptation risk assessments from its constituent organisations and to facilitate

collaborative work on long-term adaptation to climate change. The LRF could provide an ideal platform for closer working between key partners. The LRF already has the knowledge of existing risks from extreme weather events and would be ideally placed to consider how local services should adapt to the predicted changes in the frequency and severity of climatic change.

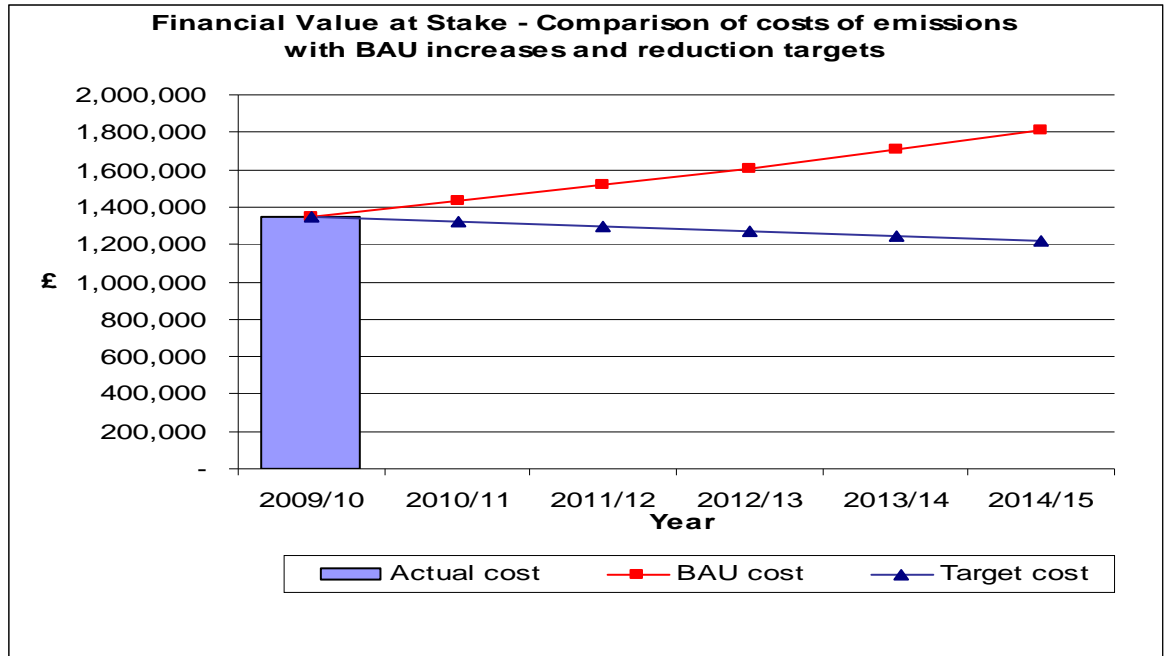
6 Climate change mitigation

- 6.1 This is about reducing our contribution to continued man-made climatic changes by reducing our carbon footprint.
- 6.2 The Service made a commitment to 'reduce our carbon footprint by 20% by 2012'. In 2008/09 the Service reported a 4% reduction on the previous year, an indication of good progress. However, as part of the 2009/10 calculation, checks were made on the previous year data which revealed significant energy use from certain buildings that had been unavailable at the time of the original 2008/09 calculation. This included gas consumption for the Stores/Fleet Management Centre on the Headquarters site, the Annexe at Eastleigh Fire Station, and a building on the Basingstoke Fire Station site. The recalculated footprint showed that there was no reduction on the previous year.
- 6.3 However, the 2009/10 carbon footprint showed a 3.3% reduction from the 2007/08 figures. Given the colder winter in that period, any reduction represents a significant achievement. Considerably more progress is required for the service to meet its target.
- 6.4 The 'Beacon Station' energy indicator has been a motivational force, but some station personnel feel constrained in what they can do because of the energy-inefficient design and age of their buildings. We have reached a difficult point in our progress on reducing energy consumption. We risk losing some of the very positive changes in individual behaviours unless we can show staff that we will continue to invest in our buildings – e.g. by improving insulation, window replacement, smart metering.
- 6.5 **Invest to Save - the business case for investing in carbon cuts**

Cutting our carbon footprint is not just environmentally important it is also financially important. Improving our energy, water and transport efficiency will save money and reduce our exposure to inevitable rises in energy, water and fuel prices. The recent Ofgem Project Discovery review looked at different scenarios for the UK energy market from 2009 to 2020. The results showed an overall increase of between 94% and 115% in electricity costs, and 64% to 139% in gas costs by 2020. In some scenarios the prices actually peaked at more than 150%. We cannot afford to do nothing.

- 6.6 This is simply illustrated (see graph below) by estimating our 'financial value at stake' using the Carbon Trust's methodology adopted by councils and fire and rescue services across the country as part of the Local Authority Carbon Management Programme. This uses some estimates for rising energy costs (5.3% a year) combined with a small Business as Usual (BAU) demand increase (0.7% a year) and compares 'doing nothing' with what would happen if carbon-saving projects were

implemented to achieve a 30% cut over 5 years. The figures, which include energy and water, and fuel and mileage claims for business travel, are based on the 2009/10 year and use billing information and fuel price estimates. The results are approximate and provided here only for illustration of the scale of the issue.



- 6.7 Over the five years of the calculation the cumulative value at stake is £1.7 million, with a difference of £585,000 in the fifth year between the BAU figure and the target cost. This provides a powerful financial business case (as well as an environmental one) for making substantial investment in carbon-saving projects. The Authority's draft corporate plan objective on improving the efficiency of our buildings is underpinned by this business case.
- 6.8 It is worth noting that as at October 2010 the Service is paying an average increase of 12.3% more than last year for each unit of gas. The level of increase varies by site and is as high as 35% for some sites. The average for wholtime fire stations is a 13.3% increase and 17.5% for Headquarters. So the 5.3% increase assumed in the 'financial value at stake' analysis is likely to be a underestimate of the actual situation we are facing.
- 6.9 There is also a real risk that further carbon related taxation e.g. the CRC (Carbon Reduction Commitment) could be extended to cover our activities, leaving us exposed to financial penalties if we do not cut emissions.
- 6.10 A new long-term partnership of organisations across Hampshire will to help address climate change, under a combined vision (interim name 'Hampshire-wide Climate Change Vision and Strategy'). The partnership is expected to be launched in April 2011. It intends to add value to climate change mitigation efforts by facilitating collaborative actions between partners. Likely areas of interest for the Authority are proposed priorities of installation of 'Solar PV' (electricity generation), and 'Energy Efficiency in Public Buildings', which fits with our objective of improving the efficiency of our buildings. As the partnership develops there will be opportunities to benefit

from collective research for project business cases, legal background, funding sources and economies of scale in procurement. The Authority has much to gain by fully engaging with the partnership but in order to take full advantage will need to be able to identify funds for any proposed projects.

7 A Strategic Plan for Carbon Management

- 7.1 Some 16 fire and rescue services have already joined the Carbon Trust's Local Authority Carbon Management Programme, including Kent, London and Greater Manchester, and others are involved through their councils. As part of the programme organisations receive support in the development of an organisational Carbon Management Plan including assistance in identifying suitable carbon saving projects. The programme starts in May each year. To take part the Authority would need to make a firm commitment to the programme, agreeing to identify and implement carbon saving projects to deliver substantial targets to cut the carbon footprint. Acceptance is not guaranteed as spaces are limited, but it is recommended that an application be made to join.

8 Network of Environmental Champions and Environmental Champions 'Handbook'

- 8.1 It is not possible for one person alone to ensure that all staff are aware of environmental issues, and that every site is doing its bit. The inclusion of energy consumption within the suite of 'Beacon Station' indicators has begun to embed carbon saving and environmental improvement as a core role of station managers. Further work is required to extend this across the whole organisation. This is why we need a network of 'Environmental Champions' and a simple set of guidance materials to assist them.
- 8.2 The North West Fire and Rescue Services have already set up their own environmental champions and provided them with a hardcopy handbook with advice to assist them in their role. They have provided the handbook materials to us and are happy for us to use and adapt them. By using these materials to provide an online resource it would be possible to provide an effective community-based tool that would be regularly updated by 'Environmental Champions' with new information and examples of best practice. There is interest amongst the South East Fire and Rescue Services in working together with the Service on such an approach.
- 8.3 The 'Environmental Champions' network will replace the previous Environmental Working Group. The wider scope of the network will make it simpler to engage effectively with staff in all parts of the organisation. Each 'Environmental Champion' can be as involved as they want to be - and as their job allows.
- 8.4 In recognition of the importance of staff engagement in our environmental performance we will work from the principle that all line managers will allow 'Environmental Champions' reasonable time to do work related to the role and assist them in delivering environmental improvements. The role would include advising staff on the environment, training, providing feedback and ideas, supporting other Champions, implementing simple improvements, research for environmental projects, and contributing to environmental audits for the Environmental Management System.

- 8.5 An example of work that a station-based 'Environmental Champion' could do is to review water use: understanding what the main water using appliances are and where the water goes allows any unexpected use to be identified. This helps to identify water leaks and defective appliances. Work of this kind has already produced 90% estimated annual water and cost savings (£2000 per station) at several stations.

9 Appliance bay heating pilot

- 9.1 A pilot study of appliance bay heating settings will be taking place in the New Forest Group with a view to establishing standard temperature settings across the service. The pilot will trial appliance bay heating temperature settings of 5°C in order to provide frost protection. At present some appliance bays are heated well above this - so energy savings are expected. The aim is to ensure there are no unintended consequences or any technical difficulties in implementing the new settings. London Fire Brigade successfully introduced this scheme in 2006 with no adverse effects.

10 Display Energy Certificates (DECs) and advisory reports

- 10.1 Public buildings over 1000m² are required to have Display Energy Certificates (DECs) which show how the energy use of the building compares to good practice benchmarks by using the familiar 'A' to 'G' rating. The Service will soon be able to produce these DECs and associated Advisory Reports which provide indications of areas for improving energy efficiency. This information will help to identify efficiency projects and track progress in the improving efficiency of our buildings.

11 Waste management

- 11.1 The EMS will provide the framework within which other environmental improvement work will take place, such as the introduction of a waste management policy to address waste minimisation, encourage procurement of recycled and recyclable products, and increase recycling rates.

12 Travel and Transport

- 12.1 The carbon footprint of our fleet and other business travel has fallen by 8.2% over the last two years. It now makes up 35% of our overall footprint (compared to 37% in 2007/08). This represents good progress, but there is scope for considerable reductions. Review of staff travel (mileage rates, the lease car scheme and the proposal to extend provided vehicles) will contribute to making our travel as efficient as possible. To make significant improvements (including commuting as well as business travel) requires increasing the levels of staff awareness of how we can reduce the need for travel (e.g. by exploiting phone and video conferencing) and access more sustainable travel options (car sharing, cycling, public transport, walking). To support this area of work a 'Green Travel Plan' for the new Winchester Fire Station has been developed and this experience will help in the development of further travel plans for the Headquarters site and then for the organisation as a whole. The proposed Environmental Champions will provide support for continuing our good progress in this area.

13 Supporting our corporate aims and objectives

13.1 Reducing our carbon footprint is a key priority for the Authority.

14 Risk analysis

14.1 The introduction of our regional Environmental Management System (recommendations 2.1 and 2.2) will ensure our operations are compliant with environmental legislation – reducing the risk of prosecution.

14.2 Adaptation to climate change risk assessment (section 5 above) will be used to support a Strategic Risk Register entry for climate change. The Authority can then better plan for any cost implications of the consequences of climate change. The partnership approach being used in the risk assessment helps to mitigate the cost of the risks.

14.3 The Financial Value at Stake (section 6 above) probably under-estimates the scale of the financial risk of not implementing a substantial 'invest to save' environmental programme. All the indications are that energy markets and environmental taxation will continue to rise, leaving the Service facing rapidly escalating costs at a time of financial constraint. The responsible response is to invest resources in energy and carbon saving projects to minimise the organisation's exposure.

14.4 There would be a reputational risk to the organisation if it joined the Local Authority Carbon Management Programme but failed to deliver improvements because of financial constraints. This risk is minimised within the programme by phasing implementation of projects. But the reputational and financial risk of not taking any action is considerably higher.

15 People Impact Assessment

15.1 The proposals in this report are considered compatible with the provisions of the European Convention on Human Rights, the Human Rights Act 1998, and the Race Relations (Amendment) Act 2000.

16 Environmental and Sustainability impact assessment

16.1 The Environmental Management System and the recommendations in this report are all about reducing our environmental impact and improving the sustainability of our operations.

17 Resource implications

17.1 Human Resources

Environmental improvement is the responsibility of every member of staff but in order to mobilise that resource and embed consideration of the environment in all parts of the organisation requires some staff time for Environmental Champions. Current environmental work can be progressed using the Environmental Impact Project Coordinator but this situation may change as projects develop.

17.2 Physical Resources

None

17.3 Information and Communications Technology Resources

Information Services and Marketing and Communications Staff time will be required to assist in creation of a suitable online space/community for the Environmental Champions.

17.4 Financial Implications

This report sets out the principles of needing to invest in the short- and medium-term in order to make longer-term savings and carbon reductions. Costs associated with specific projects and activities will be determined on a scheme-by-scheme basis.

18 Background papers

18.1 The following documents disclose the facts or matters on which this report, or an important part of it, is based and has been relied upon to a material extent in the preparation of the report:

Carbon Trust Local Authority Carbon Management Programme information

<http://www.carbontrust.co.uk/cut-carbon-reduce-costs/reduce/public-sector/local-authorities/Pages/consultative-help.aspx#CM>

Note: The list excludes: (1) published works; and (2) documents that disclose exempt or confidential information defined in the Act.