



Kent Fire &
Rescue Service

Caring for the Environment

A strategy for our role in caring for
the Environment in Kent and Medway

2013-17

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Introduction

About this strategy

Welcome to the 'Caring for the Environment' strategy. It sets out how we aim to protect the environment of Kent and Medway, as an owner of both buildings and a range of vehicles, but also when we deal with emergencies. It sets out what we would like to achieve over the next five years, and how we will know if we are being successful. It also reviews what we have done so far.

The '**Caring for the Environment**' strategy is one of five strategies set out by Kent and Medway Fire and Rescue Authority. These strategies are linked to each other but where there are particular crossovers these will be highlighted in the document.

Why do we need a strategy?

In 2012/13 we spent £1,360k on energy for our buildings and fuel/mileage for our vehicles. As energy and fuel prices increase, and local authorities are put under increasing pressure to reduce budgets, we want to ensure that we spend your money where it is most needed. At the same time this will reduce our carbon footprint, which in 2012/13 was 3,859 CO₂ tonnes. We have set a challenging target, in line with this strategy, to reduce our carbon footprint by 35% compared to our baseline year of 2008/09. Whilst saving money is clearly important, we have a responsibility as a public body not to damage the environment and to demonstrate good 'corporate social responsibility'. We also want to help reduce the impact of climate change on the people of Kent and Medway, not only through not contributing to global warming ourselves, but also by being an exemplar in local government of what can be achieved.

Where are we now?

We identified the need to improve our environmental performance in 2007. One of our first actions was to establish the Environmental Steering Group, chaired by the Chief Executive, to bring protection of the environment in Kent and Medway and the wider world into the consciousness of the organisation.

The original strategy aimed to reduce any adverse impact on the environment without compromising how well we perform at incidents and had three objectives:

- Securing full commitment from all of us to do what we can to reduce impact;
- Reducing the Authority's environmental footprint; and
- Improving sustainable sourcing.

Since then, we have been successful in implementing policies and systems to reduce our impact on the environment. For example we have:

- Continued to reduce the number of fires and therefore the environmental and economic impact on residents and businesses in Kent and Medway. In addition this directly reduces the Authority's carbon footprint by reducing mileage;
- Cut the number of false alarms we have attended through effective call management by our 999 staff, especially in relation to automatic fire alarms most often used by businesses;
- Developed operational procedures to mitigate the impact on the environment from our actions at incidents;
- Participated in the Carbon Trust's local authority carbon management programme to set a reduction target and produce a management action plan;
- Introduced smart meters to record electricity/gas consumption at our premises and use this to start identifying areas of reduction and target-setting for staff and establishments;
- Upgraded our estate in a variety of ways such as cavity and loft insulation, new windows and doors, replacing heating systems and controls, new lighting and controls;
- Developed a working relationship with the Environment Agency which recognises the common goals of proactively protecting our environment. This relationship is formalised in a signed local working agreement.

Areas of focus moving forward



This strategy focuses on six important areas: Property, Fleet, Equipment & Operational Procedures, Business Processes & Systems, Performance Monitoring and Behaviour. These areas are directly linked to how we plan to reduce energy/fuel use, to save money and reduce our carbon footprint.

This document is intended to be for our partners, our auditors, interested members of the public and our own staff. Where we have used a technical term, we have defined it in a footnote.

Chapter one: Property

The location of our buildings is fundamental to how we provide emergency cover across Kent and Medway. In 2011, through the Review of Emergency Response Provision¹, we reviewed the location of our stations to ensure we can meet our assessment of risk² across the County, and that when risk becomes demand³, that we can respond as quickly as we can. Consequently, we decided to build five new stations to meet modern day needs and these will be located in Ash-Cum-Ridley, Herne Bay, Ramsgate and Rochester, along with the redevelopment of the existing Medway fire station on Watling Street in Gillingham. Additionally, we continue to utilise our existing property to provide the right cover at the times we need it. We recognise that we need to reduce the carbon footprint attributed to our property, whilst not affecting our front-line response. The increasing rise of utility prices emphasises the significance of reducing consumption and effectively managing energy usage across our estate.

New buildings

We are in the process of planning and building five new stations to meet operational needs, the first of which will open in winter 2013. These new buildings will be highly energy-efficient and include where possible renewable technologies and other related environmental improvements such as solar photovoltaic (PV) systems and rainwater harvesting. Local planning authorities stipulate energy efficiency standards and require renewable energy such as Solar PV, rainwater harvesting and sustainable technology, such as local and recycled building materials.

The stations will be designed to support a more flexible and adaptable use of space by our staff and other groups. The areas will be zoned for heating and lighting to allow these to be controlled independently and matched to working patterns of staff.

Our existing estate

Our current buildings vary in age and construction, which influences how energy-efficient they are. While we have identified new station builds, we have also recently closed some fire stations that no longer provide the emergency cover required. These closed stations contribute to reducing our overall carbon footprint. Our approach to the existing estate will be to update the fabric and equipment in the buildings to improve energy efficiency by a broad range of actions including end-user behaviour. A programme of condition surveys will help identify opportunities.

¹ The Review of Emergency Response provision was published in October 2011, and is available on our website.

² Risk is the combination of factors that add up to the likelihood of an incident in an area.

³ Demand is the number of incidents that happen in a defined area over a defined period of time.

Across our estate, consideration will be given to how energy use can be reduced. This might include installing Building Management Systems on the highest energy-consuming buildings. A Building Management System is a computer-based control system installed in buildings to control, monitor and optimise electricity and gas usage. They can also be used to control security and alarm systems. Building Management Systems can be controlled from central or remote locations.

Energy use

Electricity use remains fairly constant across the year and is the biggest part of our building-related emissions and our most significant cost. We are always looking for ways to reduce our usage. This will be by a variety of methods such as upgrading systems by replacing wiring, lighting and equipment, and by installing automated controls and innovations such as LED technology. We will ensure that any electrical appliances are 'A' rated wherever possible. To help reduce the reliance on the National Grid, we are looking at installing solar photovoltaic systems, to generate electricity on our buildings. This will not only help reduce how much electricity we buy but may also provide the possibility to generate income over the life of the systems. The panels provide a visible statement of our commitment to reducing electricity use.

We have installed electricity and gas smart meters across our estate and where we share our property with other organisations or groups, we will endeavour to install sub-meters to monitor energy usage.

The majority of our buildings are heated by gas. A number of inefficient boilers have been replaced over recent years and we will continue to do this as part of our continuing investment in the estate. In addition, controls will be added to existing systems to help manage when the heating systems turn on and off, and the temperature to be maintained throughout the building. Cavity wall and loft insulation has been improved where possible and further opportunities to increase this will be investigated. The programme of replacing bay doors on fire stations and windows or doors with double glazed units will continue, again as part of the planned programme of works. Consideration may be given to using sustainable technology such as air and ground heat source pumps and biomass boilers. There are now only two stations that use heating oil and it is planned to convert both of these to gas in the future.

Water, waste and fuel management

The seasonal climate in which we conduct our business continues to change and we understand the importance of reducing our use of water in order to help to conserve this increasingly scarce resource. As the likelihood of flash flooding and droughts increases, we will consider ways to recycle water at existing sites. We will also continue to install low water-use fittings and find alternative ways to clean vehicles.

We will use as much water to deal with emergency incidents as we need to. But if there is a severe drought we will put in place a contingency plan to minimise water usage. However, we expect our staff to consider water use within their environmental risk assessment at incidents, and where possible, water conservation should be considered as best practice.

We will continue to look at ways to reduce the amount of waste produced and to ensure that recycling is increased. We have been recycling for a number of years at all our sites and have recently improved the process for dealing with clinical waste, by providing guidance to operational personnel on the correct disposal methods. We will look to increase recycling by working with our waste collection/recycling contractor to identify improvements to the way waste is controlled and reduced. This will include exploring whether food recycling is viable at some sites and how to increase the materials recycled, possibly by increasing the separation of materials. With landfill tax increasing year on year to 2014, increased recycling will help to keep costs down. A waste management process incorporating guidelines to staff will be developed to assist and inform staff as to our expectations and the actions they need to take.

Historically, we identified several strategically located stations across Kent and Medway to store bulk fuel in tanks to provide us with fuel resilience. We are currently in the process of moving our bulk fuel tanks above ground and the underground tanks will be decommissioned appropriately. Building on the work required to decommission the underground fuel tanks, consideration will be given to carrying out more detailed surveys of all sites to establish any environmental impact. For example, this may include ensuring all relevant sites have a drain survey.

We will also consider approaches from other public services to share our property . This might also include sharing access to our fuel tanks to assist wider operational resilience for public services.

Chapter two: Fleet

Responding to emergencies and providing community safety is at the core of our business. The way in which we use our fleet is integral to how we provide cover and resilience across Kent and Medway. However, it is important to reduce the environmental impact attributed to our fleet, whilst not affecting our response to emergencies. The ongoing rise in fuel prices heightens the importance of reducing fleet mileage and efficiently managing the fuel use of our vehicles.

Through the Review of Emergency Response Provision, we reviewed the location of our stations and how many fire engines we need by looking at risk and demand. Extensive details on this can be found in the **'Responding to Emergencies'** strategy. Subsequently, we have reduced and disposed of nine fire engines through this project. Although we are confident in the number of fire engines we need to provide our cover, we will continue to review the way in which we crew and move these fire engines, and investigate different types of vehicles we can use. Consequently, it is expected that mileage and fuel costs will reduce so savings can be gained both financially and in terms of CO₂ emissions. Information on how we plan to review crewing can be found in the **'Workforce Strategy'**.

Building on the outcomes of the Review of Emergency Response Provision we are now evaluating the equipment, number of staff and type of vehicles needed at an incident. We expect that in the future we will operate a wider range of emergency vehicles and move away from the traditional large fire engine. It is anticipated that these vehicles will be smaller and lighter and therefore will produce less CO₂ emissions and offer improved fuel economy. The Operational Capability Review, detailed in the **'Responding to Emergencies'** strategy, describes how we are reviewing the kind of vehicles we will use in future.

As we rely on vehicle movements to deliver services, the need to draw on fuel is imperative. To provide resilience even in extreme cases (e.g. bad weather or a fuel strike) is a priority and as a consequence we hold bulk fuel tanks at some stations across Kent and Medway. We pay less for fuel held in our tanks, compared with forecourt prices, and therefore all vehicles (where appropriate) are expected to 'fill-up' at these designated sites.

All our vehicles conform with the prevailing Euro Standard when purchased, and all future vehicle purchases will comply with the current (Euro 5) or future (Euro 6) standard. As we purchase new vehicles we will review their CO₂ output and potential life costing as part of the specification.

In 2011, a Light Fleet Review (vehicles under 7.5 tonnes) was conducted which produced a number of proposals to reduce costs, drive down mileage and improve vehicle practices. One of these proposals was to eradicate grey fleet⁴ travel and confine all mileage to Service-

⁴ Grey fleet travel refers to business mileage carried out in employee-owned vehicles.

owned vehicles. Grey fleet mileage by its own nature is very difficult to control and by using a managed pool vehicle scheme we expect to see a reduction in unnecessary journeys and miles travelled. We are still in the early stages of implementing this across Kent and Medway but as part of this scheme we endeavour to ensure that pool cars are available wherever necessary. To accommodate a pool vehicle scheme we have expanded our light fleet and all the new vehicles are fitted with 'stop/start' technology, speed limiters and carbon-efficient diesel engines.

Smarter Working

To achieve financial and environmental savings, as an organisation we understand the need to 'work smarter' and change staff behaviour in relation to vehicle travel. Within these times of austerity, it has never been more important to explore new ways to deliver our business and reduce CO₂ fleet emissions. These ways of working will not have a detrimental impact on how we attend emergencies.

As previously outlined, we have decided to undertake all business mileage within our own fleet. It is for this reason that we have developed a brand new travel manual. This document outlines strict rules and controls about when and how vehicles should be used, a process that was historically very difficult to govern with employees using their own vehicles. The overriding principle is that a service vehicle should be used for all business journeys. However, in some circumstances, public transport can be the most appropriate and environmentally effective option.

We have seen some immediate benefits from implementing a pool car scheme, particularly the number of staff sharing cars to undertake a business journey. Now that we have a finite number of pool vehicles, staff are expected to 'car share' more frequently and utilise the booking process. As a consequence we should see fewer journeys and this will have a positive effect on our carbon footprint.

As a Service, we have been keen to develop the use of technology as a way of working smarter and improving communications. Staff have access to computer terminals at all establishments and where applicable there is the option to work from home. This is a natural progression from a designated site of work and allows for a flexible way of working. Furthermore, teleconferencing and video conferencing facilities are available at all computer terminals to enhance communication with both internal and external personnel. Our staff are expected to make use of these E-Systems before considering a vehicle for travel. Consequently, these technologies will manage down mileage, costs and environmental emissions and result in fewer business journeys.

Over the next five years we will be exploring some significant changes in order to improve our environmental performance attributed to fleet journeys and these include the following:

Hybrid and electric cars: Car manufacturing companies continue to develop new environmentally-friendly vehicles that include hybrid and electric cars. Although these types of vehicle are still in their infancy, the Service will evaluate the cost and effectiveness of introducing these vehicles into our fleet. Currently, all our vehicles use diesel fuel. However, as new engines and fuels become available we will explore these as a carbon-reducing solution.

GPS tracking: The Service will also explore the use of GPS tracking devices for use within our vehicles. This technology will allow us to track our vehicles across Kent and Medway and allow for more efficient mobilisations to incidents. By monitoring and analysing journeys through this technology we will be able to improve driver training, expand our road network knowledge and govern mileage travelled. Therefore, GPS tracking devices could indirectly reduce fuel costs and carbon output.

Chapter three: Equipment and Operational Procedures

Whilst we are concerned about how much energy and fuel we consume, as an organisation we are aware of our responsibility to the people of Kent and Medway to reduce our impact on the environment. We will therefore continue to explore different ways of reducing the number of incidents we need to attend, whilst also looking at new technologies and techniques for dealing with these incidents when they do occur. For example, we have invested in all-terrain vehicles to help us improve our response to incidents away from the roads. Protecting your safety and the environment you live in is of paramount importance to us. It is for this reason that we continue to provide and improve our business and community fire safety advice. Extensive details on this can be found in the '**Focus on Your Safety**' and '**Focus on Business**' strategies.

As previously mentioned, we will continue to consider different firefighting techniques and technologies that protect our staff, the public and the environment. For example we have recently started using a new piece of equipment called 'Cobra'. The Cobra system is a high pressure water jet capable of piercing small holes through walls. Once a hole has been created, Cobra's nozzle design will ensure water is ejected in the form of micro-droplets. These water droplets are capable of great heat absorption and will quickly suppress and cool fire gases. After the local area has improved and temperatures have reduced, firefighters can then make a safer entry into the environment involved.

Our personnel will undertake the appropriate actions at operational incidents to protect the local environment. A well-established process requiring the completion of an environmental risk assessment is in place, which firefighting crews use to ensure that every practicable effort is made at the time to avoid or mitigate environmental damage. This includes identifying if an incident is near a Source Protection Zone or a Site of Special Scientific Interest. Crews then determine the appropriate environmental control measures to actively reduce risk to the environment. Consequently, a very effective working relationship has been established with the Environment Agency which recognises the common goal of proactively protecting our environment. A new joint Local Working Agreement has been signed with them.

As financial resources become tighter we accept the need to adapt our service delivery and operational procedures. In April 2012, we changed our policy so that between 6am and 6pm we would only respond to calls from automatic fire alarms where someone has confirmed that there are signs of fire. Since then calls have reduced during the day by 59% which means fire engines have not been called out to false alarms and were available for real emergencies. This has resulted in a reduction in vehicle journeys which has a positive impact on our carbon footprint as well as a reduction in fuel cost. In April 2013 we extended the policy to cover the full 24 hours.

We are currently reviewing equipment, number of staff and type of vehicles needed at an incident. Our operational capability review is looking at different sized vehicles, and procedures that might avoid the need for the use of traditional large fire engines. This will include looking at how staff can be transported to incidents where there is a need for firefighters but not necessarily fire engines or equipment. We should therefore see a carbon saving by using a small vehicle as opposed to a large and heavy fire engine.

We will continue to review how we provide our emergency cover across Kent and Medway and how this impacts on our carbon footprint.

Chapter four: Business Processes and Systems

We continue to look at ways we can run our business more effectively and be as lean as possible. This will include increasing the amount of E-Systems that are used to improve or remove unnecessary processes. The opportunity to review processes will help to achieve savings that can be used to support front-line services.

The use of technology and systems are integral to how we deliver our service. However, we are aware that IT has a significant impact on our carbon footprint. We have therefore been keen to implement new technologies that not only improve efficiency but are also environmentally-friendly compared with existing resources. This includes installing 'thin client' terminals, flat screens and virtual servers throughout our buildings. We have also been proactive in printer rationalisation which reduces electricity usage as well as paper and toner use.

Our procurement processes will usually look at the whole-life cost of any procurement and this includes appropriate environmental implications. These will vary depending on the goods and services being procured. We will ensure that a business need is established before a procurement process is started. Procurement processes are now run electronically and there will be a continuing use of the South East Business Portal (soon to be the Kent Portal) to advertise opportunities. This also links to the ProContract site within which the whole procurement process is managed online.

We understand the importance of developing and training our staff but are keen to improve the way vehicles are used to move staff for training purposes. We will look to promote car sharing of our vehicles by staff to access training. Additionally, we will assess where and how training is delivered. This may include delivering training to a specific station or building and subsequently reducing the number of vehicle movements to a training site. We will also deliver more training via E-Learning packages.

Since introducing a pool vehicle scheme as well as developing our IT communication solutions, it has been essential to develop a brand new travel manual. This established the processes that direct staff into making informed and appropriate decisions as to the way in which they travel for work. The use of a vehicle to attend meetings or undertake daily business should only occur when other methods of communication have been considered and ruled out for genuine reasons. By embedding this within our business we expect to see a significant cost-reduction while also improving our carbon footprint.

Chapter five: Performance Monitoring

The need to reduce our environmental impact continues to be a high priority for the Service. Furthermore, the ongoing rise of utility and fuel prices, within a tough financial climate, has had a substantial impact on people and businesses within Kent. Therefore, monitoring performance and data is the cornerstone of effectively managing energy and fuel consumption across all locations and vehicles.

Throughout 2011 and 2012 the Service had electronic smart meters installed at all locations to record electricity and gas usage. Smart meters enable us to view consumption data across all locations, with readings recorded every half- hour. Alongside this data we have developed a suite of internal reports that allow staff to monitor the consumption, CO₂ and financial cost of using electricity and gas at locations, clusters or groups.

We continue to capture more vehicle-related information within our fleet management system and subsequently have developed a suite of reports that allows us to analyse mileage and fuel consumption across the entire fleet. We have made this information more readily available for staff to monitor the carbon and financial impact. As we are moving to an environment where all business mileage is confined to service vehicles, we have installed a reporting system for booking pool vehicles. This system allows for greater control of pool vehicles, the challenging of journeys, and car sharing.

In 2013, the Service set both County-wide and local station targets for reducing both electricity and gas consumption. Furthermore, performance against these targets is more readily available through the monthly performance report as well as other online real-time reports. Targeting all sites will ensure that all our staff feel that they share responsibility to reduce 'energy waste' and subsequently reduce our CO₂ impact and utility costs. This is more important than ever given the anticipated reduction in budget over the next five years.

In late 2011 we carried out an internal review of all data systems used within the Service. The review identified a need for all systems to be quality-assured for data accuracy and subsequently improve supporting processes. Since this review, we have set up an Environmental Data Quality Forum (EDQF) to meet this need. Although we recognise that this group is still in its infancy, the long-term plan for the EDQF is to quality-assure utility and fleet usage across all establishments and fleet. Additionally, members of this group help identify environmental inefficiencies that, wherever possible, can be reduced.

We will continue to build on the performance monitoring tools available and we expect to provide greater exposure of our environmental performance to staff and you, the public. Furthermore, we will look to build on our CO₂ reporting by including all greenhouse gases in our environment monitoring.

Furthermore, we will consider using degree days (a calculation that adjusts energy used depending on the prevailing weather conditions) to calculate our carbon footprint. Weather

naturally affects energy use but currently comparing year against year is difficult as the weather impact is not taken into account. Degree days help to show what the underlying energy usage is, having taken out the variable weather factor. It is also possible that degree days could be used to see if there is a correlation of weather against operational activity.

The established Environmental Steering Group will continue to review possible areas to bring about more environmental improvements.

Chapter six: Behaviour

A number of changes to buildings, vehicles, equipment and processes have achieved many environmental benefits. However, the approach of staff towards reducing our carbon footprint and related costs is core to any changes. Without this engagement overall carbon and energy reduction is likely to be slow. The constant rise in energy and fuel prices heightens the importance of reducing our carbon footprint. By saving money on energy and fuel we will protect the most vital jobs. Moving forward, we will ensure that there is a strong approach to driving improvements across our Service.

During the life of this strategy there will be a refocusing of attention on engagement and communication with staff. Historically, the Service conducted a series of events and communications to establish a 'Green Guardian Network' of staff. The Green Guardian Network is a small group of individuals, spread across some of our stations, who have a personal interest in environmental issues. These individuals have helped raise environmental and carbon awareness across their sites. In 2013/14, we will be starting a new environmental communication programme to help inform, educate and guide staff on their role in reducing our overall carbon footprint.

Managers will be responsible for ensuring that all staff work in a manner that does not waste energy or vehicle use. They are expected to take responsibility for this through day to day management, appraisals and direct ownership of local and area-based environmental targets.

All staff will be expected to take responsibility for energy-saving and management of vehicle use. This includes considering different ways of doing business that avoids making unnecessary journeys. This could be through better diary management or using technologies such as teleconferencing/video conferencing or instant messages. Managers will be expected to encourage these practices and to challenge requests from their staff for vehicle travel. Staff will also be expected to turn off any heating or electrical appliance when not in use and contribute to driving down the carbon footprint of our buildings.

We recognise the need to provide improved resources and information for our staff and you, the public. In 2013/14 and 2014/15 we plan to roll out a brand new intranet and internet service. Within these media, we plan to have designated environment sections to host a wealth of useful information.

We will also work with local public bodies on the Green Deal initiative in Kent and Medway. Green Deal is an innovative financing mechanism that lets people pay for energy-efficiency improvements through savings on their energy bills. This is a government initiative, launched in January 2013, which is designed to help both businesses and home-owners. We will look to identify how we can provide holistic support, which might include advising the public of the

scheme through our various community safety workstreams or when we provide fire safety advice to businesses.

Over the life of this strategy we will continue to update our Carbon Management Plan which supports this strategy. As we identify and quantify potential projects these will be incorporated into the plan and help further improve our environmental performance.