

**GREEN ENVIRONMENTAL  
AMBULANCE NETWORK  
UNITED KINGDOM OF  
GREAT BRITAIN  
AND NORTHERN IRELAND**



**GREEN  
PASSPORT**





The **GrEAN (Green Environmental Ambulance Network)** is a network of all of the ambulance services across the UK who are working to reduce the collective carbon footprint of the ambulance services. The network involves staff from Estates, IT, Procurement, Operations, Driver training and Fleet as well as paramedics, ensuring that everyone within the services are working together to reduce the emissions that we all emit at work.

This guidebook is your A to Z of carbon reduction.

Find out how you can improve the carbon footprint of your ambulance service as well as your own through a variety of different measures:

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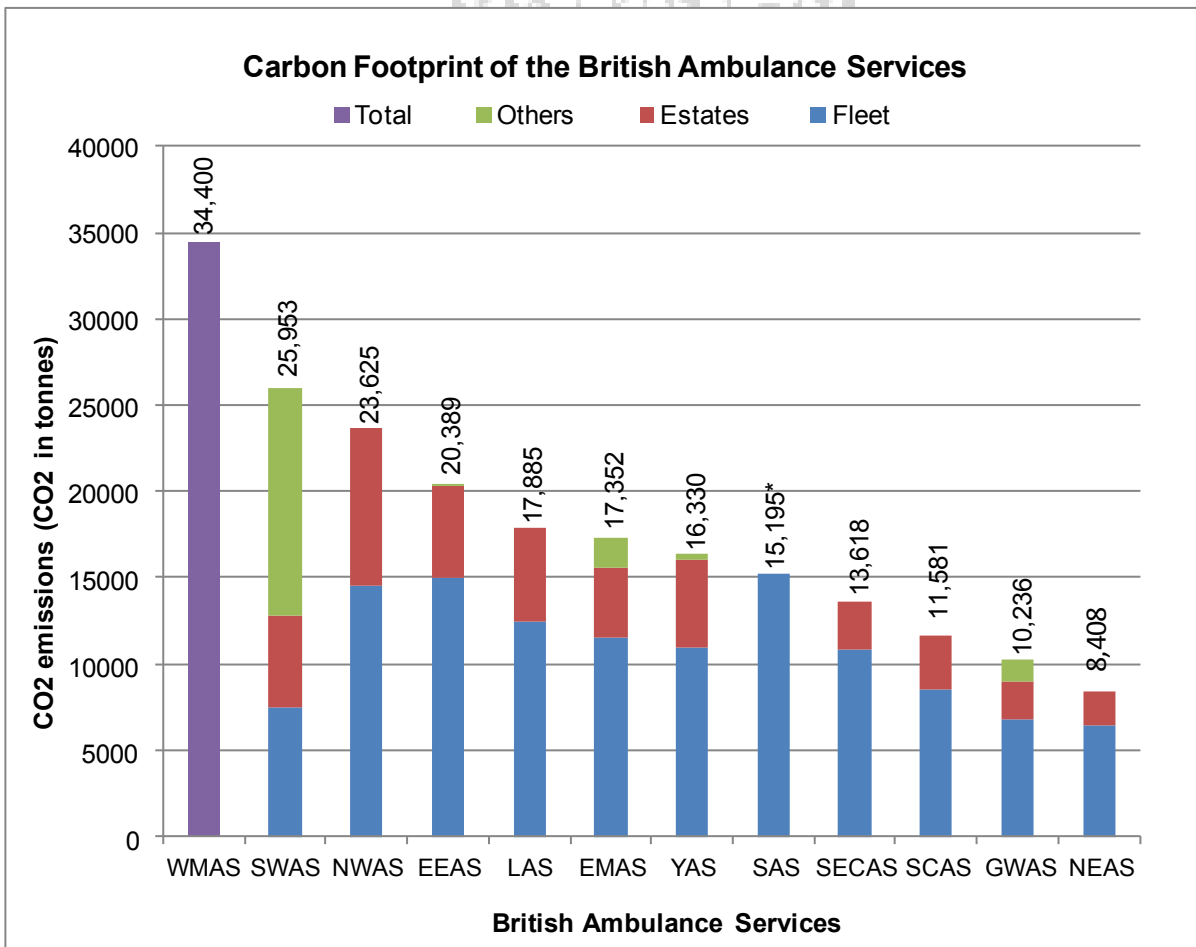
If you want any further information as to how to reduce your impact on the environment or want to know more about what your Ambulance Service is doing to reduce the impact that you are having when you come to work, then please do not hesitate to contact the **Green Team/Carbon HQ us on .....**



## CARBON FOOTPRINT

A Carbon Footprint is "the total set of greenhouse gas (GHG) emissions caused by an organization, event, product or person." Greenhouse gases can be emitted through transport, land clearance as well as the production and consumption of food, fuels, manufactured goods, materials, wood, roads, buildings and services. For simplicity of reporting, it is often expressed in terms of the amount of carbon dioxide, or its equivalent of other GHGs, emitted.

The carbon footprint (tonnes of CO<sub>2</sub>) of each Ambulance Service in 2010 is presented in the table below:



NB Not all of the ambulance service CO<sub>2</sub> figures are featured as some have not carried out their carbon assessment. \* SAS only provided their fleet figures.

The average carbon footprint of the average adult in the UK is 11 tonnes per year. An average of 3 tonnes can be added to your annual footprint by working for the ambulance service. You can calculate your own carbon footprint through these web pages:

[www.carbonindependent.org](http://www.carbonindependent.org), [www.carbonfootprint.com/calculator.aspx](http://www.carbonfootprint.com/calculator.aspx) and [carboncalculator.direct.gov.uk](http://carboncalculator.direct.gov.uk).





## **CARBON JARGON EXPLAINED**

It is sometimes confusing as to what is meant by the terms global warming, climate change, carbon emissions as well as all the other carbon jargon that is banded about. This section explains the significance of the terminology. The BBC has a webpage explaining all the jargon - [www.bbc.co.uk/news/science-environment-11833685](http://www.bbc.co.uk/news/science-environment-11833685).

### **Air pollution**

Air pollution is the introduction of chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or cause damage to the natural environment or built environment into the atmosphere. Air pollution can come from a variety of different sources and include CFCs, CO<sub>2</sub>, NO<sub>x</sub> and CH<sub>4</sub>.

### **Carbon Emissions**

The dominant man-made greenhouse gas (GHG) is carbon dioxide (CO<sub>2</sub>), which is emitted whenever we burn fossil fuels in homes, factories or power stations, but other greenhouse gases are also detrimental. Methane (CH<sub>4</sub>) emitted mainly by agriculture and landfill sites, is 25 times more potent per kilogram than CO<sub>2</sub>. Even more potent but emitted in smaller quantities are nitrous oxide (N<sub>2</sub>O), which is about 300 times more potent than carbon dioxide and released mainly from industrial processes and farming, and refrigerant gases, which are typically several thousand times more potent than CO<sub>2</sub>.

### **Carbon Footprint**

A Carbon Footprint is explained on page 3 but in summary it is "the total set of greenhouse gas (GHG) emissions caused by an organization, event, product or person."

### **Climate Change**

Climate change is a periodic modification of earth's climate brought about as a result of changes in the atmosphere as well as interactions between the atmosphere and various other geologic, chemical, biological and geographic factors within the Earth system. It is a significant and lasting change in the statistical distribution of weather patterns over periods ranging from decades to millions of years. Climate change will lead to a variety of effects that will affect the whole of the UK. . A summary of potential climate change effects is presented on page 5 (source: [Met Office](#)).

### **Greenhouse Gasses and Greenhouse Effect**

There are 6 greenhouse gases (GHG) monitored by the Kyoto Protocol - CO<sub>2</sub>, CH<sub>4</sub>, NO<sub>2</sub>, SF<sub>6</sub>, HFC and PFC. The Greenhouse Effect is a term that applies to the warming effect within the atmosphere caused by GHGs retaining heat and not allowing it to escape from the atmosphere.

### **Global Warming**

Global warming is the theory that describes how the increase in Greenhouse Gases in the earth's atmosphere lead to the retention of more of the sun's energy and resulting in an increase in global temperature. Scientific evidence continues to support the theory with increases in global temperature being recorded. The term has been superseded by the phrase 'climate change' as the observed effects of 'global warming' will not be seen in all parts of the world, however global temperature are predicted to rise between and 3.4 to 6.1 °C in the 21st century.



	<b>Energy</b>	<b>Water</b>	<b>Agriculture</b>	<b>Built environment</b>	<b>Transport</b>
<b>Extreme Weather</b>	The UK's energy infrastructure is at risk from extreme weather such as flooding and heatwaves.	Wetter winters and sea level rise will increase flood risk in the UK.	Extreme weather such as storms or heatwaves can cause major damage to crop yields.	Buildings in the UK will have to withstand more extreme increased temperatures and rain.	Increased temperatures and rain will have a big effect on road and rail networks in the UK.
<b>High Temperatures</b>	Hotter UK summers will increase the demand for air-conditioning; less heating will be needed in winter. Power cables under-perform when it is hot.	Higher temperatures could cause water demand to rise.	Higher year-round temperatures could allow new crops to flourish in the UK. Diseases and pests could survive milder UK winters.	People will be more vulnerable to heat stress caused by increased temperatures and humidity.	Road surfacing will melt unless replaced with different materials.
<b>Droughts</b>	Many power stations use water from rivers to cool their turbines — less water will be available, increasing competition with other water users.	Droughts will increase current pressure on water demand, supply and quality — including in the UK.	Longer droughts could reduce UK crop yield or increase demand for irrigation, but will hit eastern parts of the UK the hardest.	Drier soils lead to subsidence — foundations may have to be very deep to reach more secure soil.	Subsidence caused by changes in soil-moisture content may lead to more frequent and expensive repair of infrastructure.
<b>Floods</b>	In the UK many power stations are situated on the coast so future planning will need to account for predicted sea level rise.	Sewage flooding could increase due to more heavy rainfall.	More heavy rain will lead to increased risk of flooding. This will wash out nutrients and lead to waterlogging of fields.	The location of building projects, drainage and flood-resilient construction will be increasingly important in the UK.	Coastal roads and railways are threatened with wetter UK winters, intense rainfall, coastal erosion and sea-level rise.
<b>Urban Heat Island</b>	Cities tend to be much warmer than their surroundings. Peaks in electricity demand due to air-conditioning occur during summer heatwaves.	Higher urban temperatures will increase water consumption, including demand associated with cooling buildings and watering gardens and parks.	Higher winter temperatures in cities can support the life cycle of some non-native agricultural pests which can spread into rural areas.	Reflective roof coverings and light-coloured building materials can help combat over-heating in cities.	Summer temperatures, which can already reach uncomfortable levels on public transport systems in UK cities, are set to increase.





## ECO DRIVING

Eco driving is simple and can be incorporated into your normal driving saving you time and money as well as saving fuel. On average, implementing eco driving can save around 10% on your fuel bills. Here is how you can easily carry out eco driving:

1. **Drive off from cold** - warming an engine up just wastes fuel.
2. **Watch your speed** - keep below the speed limit, the faster you drive the more fuel is used and the more money you spend.
3. **Drive smoothly** - stop/start driving uses more fuel.
4. **Reduce weight** - it takes more fuel to drive a heavy vehicle.
5. **Reduce drag** - only use accessories that you need. Take off unnecessary roof racks, bike carriers and roof boxes as they affect your vehicle's aerodynamics and fuel efficiency.
6. **Plan your journey** - avoid traffic, roadworks and getting lost.
7. **Check your tyre pressures** - under inflated tyres are dangerous, increase fuel consumption and wear out quicker. Check your tyre pressure once a week.
8. **Check your revs** - change gear between 2000 and 2500 revs.
9. **Turn off the A/C** - it uses more fuel.
10. **Take your foot off the accelerator** when you don't need to accelerate. Staying in gear when going down a hill and not touching the accelerator, uses less fuel than coasting in neutral.
11. **Switch it off** - turn off your engine when you are stopped. An idling engine can waste 3 litres of fuel/hr.
12. **Back in, not out!** Reversing at slow speed with a cold engine is heavy on fuel. It is best to drive off steadily on a cold engine first thing and rely on backing in with a hot engine later on.
13. **Conduct gentle braking;** delaying a gear shift until just before the engine starts to shudder will also save fuel. Remember that car technology has moved on in recent years. Within limits, you can skip gears (i.e. from second to fourth, or fourth to second) in ways that were once frowned upon, provided that you are already travelling at a speed appropriate to a lower or higher speed.
14. **Anticipation** - gauge distances and come to a stop using existing momentum. If you are stopping, don't race up and rely on braking at the last minute, but adjust your speed in advance. Anticipate what the traffic lights are likely to do and adjust your speed accordingly.
15. **Don't drive your own vehicle!** Simple, but if you drive it less, you use less fuel. Car share, walk, catch a bus or get on your bike instead and save money.



If you want any further help, drop your driver trainers an email.

## **ENERGY**

### **What can you do to reduce your energy bills and consumption?**

- Compare suppliers.
- Make home improvements.
- Reduce, re-use and recycle.
- Turn off, turn down or unplug appliances.
- Switch to direct debits and paperless bills.
- Find out what your carbon footprint is with the Energy Saving Trust Carbon Footprint Calculator ([www.energysavingtrust.org.uk/calculator/start](http://www.energysavingtrust.org.uk/calculator/start)) and how to reduce it.
- Monitor your energy use with an electricity monitor, take regular readings, carry out an [energy reduction plan](#) and find out how to read your [fuel bill](#).

### **Generating your own energy**

If you can generate your own electricity or heating, you can save a lot of money and carbon emissions. Different ways to reduce your reliance on the grid is presented below:

#### **Wood Fuel Heating/Biomass Boiler**

Log-burning stoves and boilers have to be filled with wood by hand. Some pellet and chip burners use automatic fuel feeders which refill them at regular intervals from fuel storage units called hoppers. A biomass boiler could save you around £390 a year on heating bills.

#### **Solar Electricity (PV)**

Solar photovoltaic panels (PV) use energy from the sun to create electricity. PV requires only daylight, not direct sunlight, to generate electricity. The PV cell consists of one or two layers of a semi conducting material, usually silicon. When light shines on the cell it creates an electric field across the layers, causing electricity to flow. The greater the intensity of the light, the greater the flow of electricity. PV arrays now come in a variety of shapes and colours, ranging from grey 'solar tiles' that look like roof tiles to panels and transparent cells that you can use on conservatories and glass to provide shading as well as generating electricity.

#### **Solar Water Heating**

Solar water heating systems use heat from the sun to work alongside your conventional water heater. They can provide almost all of your hot water during the summer months and about 50% year round. Solar water heating can be used in the home or for larger applications, such as swimming pools. For domestic hot water there are three main components: solar panels, a heat transfer system and a hot water cylinder. Solar collecting panels are fitted to your roof and they collect heat from the sun's radiation. The heat transfer system uses the collected heat to heat water. A hot water cylinder stores the hot water that is heated during the day and supplies it for use later.





## **ENERGY**

### **Ground Source Heat Pumps**

At a metre underground, the ground is at a constant temperature throughout the year, with temperatures usually between seven and 13°C. This heat can be extracted using a heat pump which runs a mixture of water and glycol through loops buried in the ground. Ground source heat pumps operate in a similar manner to domestic refrigerators, operating in reverse, whereby the heat extracted from the ground is used to warm the property, whereas with a refrigerator the heat extracted is used as a method for cooling. Every unit of electricity used to run the heat pump will typically produce three to four units of heat.

### **Air Source Heat Pump**

An air source heat pump extracts heat from the outside air in the same way that a fridge extracts heat from its inside. It can extract heat from the air even when the outside temperature is as low as minus 15°C. There are two main types of air source heat pump system: a. Air to water system, b. Air to air system.

### **Wind Power**

In the UK we have 40% of Europe's total wind energy, but it's still largely untapped and only 0.5% of our electricity requirements are currently generated by wind power. Wind power is proportional to the cube of the wind's speed, so relatively minor increases in speed result in large changes in potential output. Individual turbines vary in size and power output from a few hundred watts to two or three megawatts (as a guide, a typical domestic system would be two-and-a-half to six kilowatts, depending on the location and size of the home). Modern wind turbines efficiently convert wind power directly into electricity even at quite low wind speeds.

Further information can be found at [www.energysavingtrust.org.uk](http://www.energysavingtrust.org.uk).

## **GRANTS**

There are several grants available, whatever your circumstances, to help with insulation and bills. For further information the Energy Savings Trust page provides help - [www.energysavingtrust.org.uk](http://www.energysavingtrust.org.uk).

### **Feed-in Tariff**

If you have installed, or are thinking about installing, a renewable technology which produces electricity, such as a solar electricity (PV) system, you may be able to get paid for the electricity it produces. Feed-In Tariffs (FIT) provide a guaranteed rate for each unit of electricity generated and exported.

### **Renewable Heat Incentive**

The Renewable Heat Incentive (RHI) was launched in June 2011 and is designed to provide financial support to encourage the uptake of renewable and low carbon heat technologies like heat pumps.





## GREEN CHAMPIONS

All the ambulance services are looking to get staff involved in the big carbon challenge and work towards reducing our carbon footprint. Across the ambulance services there is a network of Green Champions or Carbon Champions helping to cut emissions, save fuel and reduce energy use across the country.

If you would like to join the realms of green minded ambulance staff across the country, please get in contact with your **Green Team on @.nhs.uk.**

## GREEN HEALTHCARE

The major health impacts of climate change are: heat waves and cold illnesses, air pollution, malnutrition, deaths and injuries caused by storms and floods (flooding can also be followed by outbreaks of cholera), water scarcity or contamination and vector-borne diseases.

Many of the major killers such as diarrhoeal diseases, malnutrition, malaria and dengue are highly climate-sensitive and are expected to worsen as the climate changes. The major global killers affected by climate annually are weather (over 60,000), malaria (900,000), under nutrition (2.5 million) and diarrhoea (2.2 million) (figures from the WHO).

Some of the effects of pollution and climate change include:

- Increase in sunburn, skin cancer and possibly cataracts
- Air pollution also contributes to environmental related deaths. By reducing particulate matter (PM<sub>10</sub>) pollution (air pollution) from 70 to 20 micrograms per cubic metre, we can cut air quality related deaths by around 15%. It is estimated that cleaner air in the United Kingdom resulting from a 30% reduction in emissions would result in public health benefits of between €326 million and €941 million per year from 2020. Read the section on Transport and Eco driving for more information on how to cut your air pollution emissions.
- Food borne diseases—likely increase in cases of food poisoning
- Waterborne diseases—likely increase in cases of Cryptosporidiosis with an increase in temperature having an impact on water quality and disinfection
- Vector borne diseases— increase in distribution of malaria, increase in flies, midges, fleas, stinging insects, tick borne diseases (like lyme disease and tick borne encephalitis) become more common (due to change in land use/leisure activities rather than climate change)
- The knock on effects of climate change will affect health through water scarcity, global population movement, malnutrition as well as droughts and floods





## **GREEN YOUR HOME**

It is easy to green your home with a few simple measures.

1. **Insulate your house.** Install/top up your loft insulation, cavity wall insulation, and floor insulation. The insulation section for more ideas on how to keep your house warm your house as well as save money on your heating bills.
2. **Draught proof your house.** By sealing all the gaps in window and door frames, installing a draught proof letterboxes, closing the curtains at night, you can keep the heat in longer and reduce your heating bills. The insulation section has more information.
3. **Turn your thermostat down by 1°C.** By reducing the temperature, you can save up to 10% on your energy bill. The ideal home temperature is between 19°C and 21°C and typically saves around £65 per year. If you have a programmer, set your heating and hot water to come on only when required rather than leaving it on all the time.
4. **Is your water too hot?** Your water cylinder thermostat should be set at 60°C/140°F.
5. **Get a high-performance showerhead.** That doesn't mean a drippier shower, but it will use 60% less water.
6. **Fill up your washing machine, tumble dryer or dishwasher:** one full load uses less energy than two half loads. **Replace major appliances with Energy Star models.** They are more efficient in water and energy use as well as saving you money on your energy bills.
7. **Use energy saving light bulbs.** They last up to 10 times longer than ordinary light bulbs and for each one used, you can save around £45 over the lifetime of the bulb. If you turn the lights off when you leave the room as well you will save even more.
8. **Use chemical free, natural cleaners.** Baking soda, salt and vinegar are just a few natural cleaners you can use to clean your home.
9. **Install double-glazed windows or double glaze your existing sash windows.** Double glazing cuts heat loss through windows by 50% and can save around £140 a year on heating bills. You will external reduce noise as well as stop heat loss through your windows.
10. **Use Green Energy.** You can select to buy green electricity by buying energy from green suppliers like Good Energy ([www.goodenergy.co.uk](http://www.goodenergy.co.uk)), which make their energy from renewable sources (like wind/water/wave/biomass). .

If you turn off your appliances (laptops, televisions and mobile phones on charge) and don't leave them on standby you can save more money.



## GREEN YOUR OFFICE

Did you know that 80% of the UK's lighting energy is used at work? Or that on average, each person in the UK, throws away 7 times their body weight (about 500kg) in rubbish every year? Or that up to 100 Million ink cartridges are used a year, consuming 50,000 tons of fossil fuel oil-based toner? How can you Green your office?

1. **Turn it off** - If we turn off all our electrical appliances at night - all our computers, phone chargers and electronic devices - we can cut annual carbon emissions by about 204 kg per employee. We'll slice a chunk off our electricity and gas bills too. Don't forget the lights when you leave! Lights left on all night in empty offices and meeting rooms waste energy.
2. **Turn it down** - Turn your office/station thermostat down by 1°C and cut the heating bills by up to 10%. The best office temperature is 19-22°C. Anything above this temperature is a waste of heat and energy.
3. **Repaper the office** - over 40% of office stationery ends up in landfills and most ambulance services use about 3 - 4 million pieces of paper a year, much of which is thrown away. Reduce paper use by viewing emails/reports on screen and if you must print, use recycled paper ([www.alocalprinter.com/uk/recycled-paper](http://www.alocalprinter.com/uk/recycled-paper)), reuse paper, print in draft format and on both sides.
4. **Rethink, reduce, reuse and then recycle** - Nearly everything in the average office deserves a second life ([www.wasteonline.org.uk/](http://www.wasteonline.org.uk/)), from plastic to paper and printer cartridges to pens, pencils, mobiles and even photocopiers. Think before you print.
5. **Natural lighting** - Open the blinds and curtains and turn off the light. The best kind of working light is natural light .
6. **Get to work together** - One year's driving coughs up about 1,778 kg of CO<sub>2</sub> per person. If you lift share ([www.liftshare.com/uk/](http://www.liftshare.com/uk/)) to work you can half your annual fuel costs. If you work within 5 miles of your work space, you could cycle or walk.
7. **Switch your engine off** - If your office is a vehicle, then you can green your work space by minimising fuel consumption by switching your engine off when not needed, plug it in to recharge and by carrying out eco driving.
8. **Ring in** - When practical, hold video or phone conferences instead of travelling to meetings.
9. **Think seasonal** - If you can work from home as part of your job, it's best to work from home more in summer than winter, or the energy you save on travel will be offset by the extra energy needed to heat your home in the day. In winter, make sure your home office space is well insulated, along with the rest your home and try to avoid heating areas of the home you're not using.
10. Become a **Carbon/Green Champion** and join the Green Team across the Trust.





## INSULATION

An uninsulated house loses 60% of the heat through the walls and roof. Insulation should always be the first home improvement. If every UK household with suitable cavity walls had insulation installed it, the UK could save £690 million and 4 million tonnes of CO<sub>2</sub> every year.

Insulation is a material that prevents heat from escaping from your house. You can tell if you have insulation looking in your loft space or you are missing insulation by looking at your roof from the outside when it is covered in fresh snow or have thermal image taken of your house. The recommended amount of insulation is 270mm in your roof.

### **How much does it cost to insulate my house?**

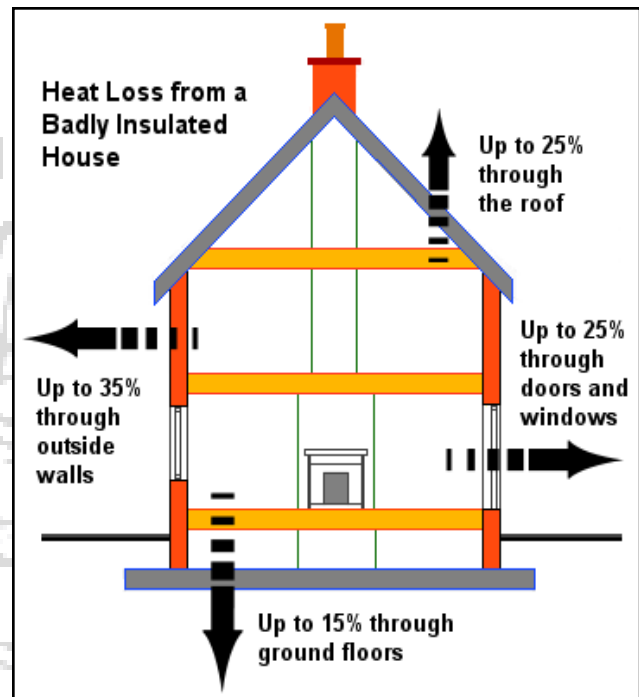
Loft insulation—£150 - £250; cavity wall insulation—£150 - £250; floor insulation—£100; draught proofing—£100 - £200\*.

There are many grants for insulation and energy efficiency available that will help to reduce the cost of installation. Per year, loft insulation can save around £150; cavity wall insulation can save around £115; floor insulation can save around £100; draught proofing can save £25\*.

### **What can you insulate?**

There are several areas of your house that you can insulate: [loft spaces](#), [pipe work](#), [hot water tank](#), [floorboards](#), [chimneys](#), cavity walls, solid walls, draught proofing with double glazing, filling cracks in walls, around pipes into loft spaces, loft hatches, letterboxes, keyholes, around sash windows, redundant extractor fans, external doors and skirting boards.

The easy DIY ways in which you can insulate these areas of your house can be found at [www.ehow.com](http://www.ehow.com) - just type in the type of insulation you want to install. Alternatively contact the Energy Savings Trust to see if there are any installers in your area that can safely install the required insulation.



\* Source: Energy Saving Trust



## INFORMATION TECHNOLOGY

The sending, sorting and filtering of spam and email alone accounts for 33bn units of electricity each year. Each computer and monitor that is left on standby overnight and weekends wastes £20 a year. There are many simple ways that you can reduce the impact of your computer.

- **Turn it off** - Turn off your computer and screen at the end of the day. If you turn off all your electrical appliances at night - all our computers, phone chargers and electronic devices we can cut annual carbon emissions by about 204 kg per employee.
- **Change your screen settings** – decrease the length of time it takes to turn your monitor off after 5 minutes or even less. You can read more on <http://www.tech-faq.com/configuring-power-management.html> or go to **Control Panel > Click on Screen Saver > Power > Minimal Power Management**. Setting it to switch off after 15 minutes will save about 9kg of CO<sub>2</sub> (enough to fill 325 party balloons) over a year, just from your lunch breaks alone - or more if you work away from your computer at times as well.
- **Go to sleep** - Set up your computer to go into sleep mode when not in use. Short energy breaks can cut energy use by up to 70%.
- **Send pdfs or zipped files** for large documents (a spam email accounts for 0.3g CO<sub>2</sub> equivalent (CO<sub>2</sub>e)), a normal email produces 4g of CO<sub>2</sub>e and an email with an attachment produces 50g of CO<sub>2</sub>e) (source: [The Guardian](#))
- **Signatures** - At the end of every email you can add a signature. Why not add a tag line encouraging your email recipients to not print your email? To create a signature - **Open Outlook > Click on 'Tools' on the top bar > Select 'Options' > Select 'Mail Format' from the tabs on the pop up > Select 'Signature' on the bottom of the box and then 'Edit' > Input your signature.**

## LIGHTING

Did you know that 80% of the UK's lighting energy is used at work? Office lights left on overnight use enough energy in a year to heat a home for almost 5 months. Here are some ways to reduce the amount of energy used by lighting

- Turn off lights when you leave a room.
- Turn off the lights at the end of the day.
- Don't turn the lights on if you don't need to.
- Open the curtains or blinds and you won't need to turn the lights on
- At home replace high energy lights with low energy light bulbs.





## **MEETINGS**

The NHS account for 5% of the UK's travel. Travelling to meetings costs the NHS a huge amount every year, not just in transportation costs but in travel time. Instead of travelling to your meeting why not consider one of the following:

- Web conferences
- Telephone conferences
- Email

## **RENEWABLES**

There are a wide range of renewables on the market that can help you reduce your energy use. The energy section in this booklet provides details on how you can generate your own electricity from wood biomass boilers, solar heating and solar PV, ground source heat pumps, air source heat pumps and wind power.

You can also select to buy green electricity by buying energy from green suppliers like Good Energy ([www.goodenergy.co.uk](http://www.goodenergy.co.uk)). You can read more in the Energy section.

## **SUSTAINABLE LIVING**

The three biggest effects most people have on climate change come from: energy used at home, travel and the food we eat. Most other environmental problems, like pollution or extinction of endangered species are also a result of everyday demands for food, products and energy.

### **Greener Home**

Saving energy at home is one of the most important things you can do to fight climate change and can save you money.

### **Greener Travel choices**

Choose fuel saving cars - A fuel efficient car can save you three months' worth of fuel a year. Lift share and half your fuel costs. Drive less and catch the bus/walk/cycle. Have a look at the Eco driving and Transport section.

### **Greener food choices**

Food counts for nearly a third of most people's effect on climate change.

Waste less food. Buy climate and wildlife friendly foods. Become vegetarian. Buy local food from your local farmer. Read more in the sustainable food section.

### **Greener shopping**

Here are some ways to help the environment when you shop. Choose products with Green labels. Turn down plastic bags and use a reusable one. Ask for and choose greener choices.

### **Recycle and waste less**

Reusing and recycling instead of throwing items away will mean less waste and less energy needed to make new items. Reuse and repair. Recycle more. Get composting. Read more in the waste and recycling section.



## SUSTAINABLE FOOD

### How to make your food sustainable

1. **Buy local, seasonally available ingredients as standard** in order to minimise energy used in food production, transport and storage. See which foods are in season now - ([www.eattheseasons.co.uk](http://www.eattheseasons.co.uk)).
2. **Buy food from farming systems that minimise harm to the environment** such as certified organic produce. For information about organic certification, see the Soil Association ([www.soilassociation.org](http://www.soilassociation.org)).
3. **Reduce the amount of foods of animal origin (meat, dairy products and eggs) eaten** as livestock farming is one of the most significant contributors to climate change. Eat meals rich in fruit, vegetables, pulses, whole grains and nuts. Ensure that meat, dairy products and eggs are produced to high environmental and animal welfare standards. See the Compassion in World Farming's Eat Less Meat campaign ([www.eatlessmeat.org](http://www.eatlessmeat.org)) for more information.
4. **Stop buying fish species identified as most 'at risk' by the Marine Conservation Society** ([www.fishonline.org/advice/avoid](http://www.fishonline.org/advice/avoid)) and buy fish only from sustainable sources – such as those accredited by the Marine Stewardship Council ([www.msc.org](http://www.msc.org)).
5. **Choose Fairtrade-certified products** for foods and drinks imported from poorer countries to ensure a fair deal for disadvantaged producers. Find out about Fairtrade products ([www.fairtrade.org.uk](http://www.fairtrade.org.uk)).
6. **Protect you and your family's health and well-being** by making sure your meals are made up of generous portions of vegetables, fruit and starchy staples like whole grains, cutting down on salt, fats and oils as well as cutting out artificial additives. The Food Standards Agency ([www.eatwell.gov.uk/](http://www.eatwell.gov.uk/)) has advice on all these topics.
7. **Reduce your waste.** We throw away 8.3 million tonnes of food waste every year and if everyone in the UK ate the food that could be eaten, the carbon reduction would be equivalent to taking 1 in 4 cars off the road. Find out how to love your food and hate waste ([www.lovefoodhatewaste.com](http://www.lovefoodhatewaste.com)). **Cut down the amount of excess packaging that comes around your food** by telling retailers that you would prefer to receive goods in minimal packaging, reuse your plastic bags and packaging.
8. **Compost any food waste** you can't eat by using a compost bin ([www.getcomposting.com](http://www.getcomposting.com)) wormery or your council bins.
9. **Avoid bottled water** and instead drink plain/filtered tap water and reduce the packaging.
10. **Grow your own** in your garden, allotment or in a windowsill box and reduce your food miles ([www.organiclinker.com/food-miles.cfm](http://www.organiclinker.com/food-miles.cfm)).





## **TRANSPORT**

The NHS accounts for 5% of all road traffic in England, with staff, patients and visitors travelling over 20 billion km a year by car. Within the NHS we have a responsibility to reduce our emissions impact.

### **What is a green car?**

A green car is a vehicle that is considered to be environmentally friendly and to have a less damaging impact on the environment than conventional cars. A green car consumes less petroleum than conventional cars or uses renewable energy sources to fuel its engine. There are a number of green cars available today including electric cars, hybrid cars, hydrogen cars, solar cars. However, conventional cars can become environmentally friendly if used in the correct manner.

### **Want to find out more about green car technologies?**

- Next green car - [www.nextgreencar.com](http://www.nextgreencar.com)
- Petrol prices - [www.petrolprices.com/green-technologies.html](http://www.petrolprices.com/green-technologies.html)
- Environmental Transport Association - [www.eta.co.uk](http://www.eta.co.uk)
- Green cars with CO<sub>2</sub> emissions under 150g/km - [www.thegreencarwebsite.co.uk](http://www.thegreencarwebsite.co.uk)

### **Lift share**

Over 10 million car seats go empty on our roads everyday. Car share and we could halve this number and cut emissions drastically. The typical commuter who car-shares every day saves about £800 a year. If everyone who drives to work on their own caught a lift with someone else only once a week, commuting car journeys would be reduced by up to 25%. Only a 3.6% increase in car occupancy would have the same impact on CO<sub>2</sub> levels and road congestion as doubling the number of people who use buses! Individuals, employers, communities and councils are being urged to encourage car sharing schemes. The numerous benefits include:

- Reduced petrol costs
- Reduced wear and tear on your vehicle
- Reduced mileage and depreciation
- Reduced space needed for car parking in workplaces
- Reduced traffic congestion in and around offices and work places
- Reduction in the high level of pollution created by rush hour commuters
- Reduction in the cost of providing employee parking spaces
- Reduction in morning congestion (ie children being taken to school makes up to 15% of morning road traffic).
- You can have a look at [www.liftshare.com](http://www.liftshare.com) or the [www.citycarclub.co.uk](http://www.citycarclub.co.uk) for some alternative ways of sharing your lift





## **TRANSPORT**

### **Eco Driving**

Have a look at the eco driving section to see how you can carry out efficient eco driving. If you conduct eco driving in your own vehicle you can save up to £400 a year on your fuel. If you conduct eco driving in your work vehicle and you could save your Trust up to £1.5 million per annum through reduced fuel use, reduced fuel consumption, fewer accidents and lower maintenance costs.

### **Ambulances**

Across the Ambulance Trusts, the fleet departments are working to improve the efficiency of the ambulances within our fleets. The fleet departments have been looking at the aerodynamics, weight and fuel efficiency of our vehicles. The next generation of ambulances will be more efficient and have more modern technologies installed.

### **Emissions**

All the ambulance services are working to reduce the CO<sub>2</sub> emissions of the service across the country by reducing the CO<sub>2</sub> emissions of lease cars and new vehicles into the fleet. By carrying out eco driving you can further reduce the emissions of the fleet. See the eco driving section.

### **Lease cars**

If you are eligible for a lease car, please contact your fleet department to see what they are doing to reduce the emissions from lease cars.

### **Public Transport**

If you want to find out how you can get to work or what transport options are available to help you to drive your travel costs down have a look at the [www.transportdirect.info](http://www.transportdirect.info) page which can help you plan your journey from home to your place of work.

### **Air travel**

Air travel produces ten times the CO<sub>2</sub> of an equivalent rail journey. If you really can't avoid the flight, at least book tickets online saving paper, saving trees, which consume CO<sub>2</sub>.

### **Cycling**

Cycling is a great way of getting and staying fit. It's known as a low-impact activity, which means it doesn't put a strain on your joints. If it's been a while since you took exercise remember to take things easy and if you suffer from a medical condition have a quick word with your doctor. About 75% all personal journeys are less than 5 miles long – that's half an hour on a bike. It's almost free. Bicycles can be very cheap to buy. They don't need an MOT or fuel and can be parked almost anywhere for free.





## WASTE AND RECYCLING

The NHS is responsible for every 1 in 100 tonnes of domestic waste generated in the UK, with the vast majority going to landfill. Here are some ways in which you can reduce the impact on the amount of waste sent to landfill. Also read the section on how to Green your office.

1. **Recycle unwanted equipment** - A lot of furniture and electrical equipment can be recycled. Many recycling centres will pick up large items. Alternatively give it to charity or sell it.
2. **Join your local group of Freecycle or Freegle** - They offer unwanted or unneeded household “stuff” for free to each other. Keep your unwanted “stuff” out of the landfill and in the hands of someone who can reuse it. ([www.freecycle.org](http://www.freecycle.org) and [www.ilovefreegle.org](http://www.ilovefreegle.org))
3. **Newspapers** – Why not look up the news on your computer, it uses less energy than cutting down the trees, making the paper and transporting it to your house for it to then be thrown in the bin.
4. **Use a thermos** - instead of making tea or coffee in cups make your drinks in a thermos flask or teapot/cafetiere. You will use fewer tea bags and less coffee.
5. **Buy less stuff** - If you don't need it, don't buy it. Besides saving money and not cluttering up your house, not buying things in the first place means never using the resources (materials, energy and labour) necessary to create it.
6. **Recycle aluminium cans** - If all the aluminium cans sold in the UK were recycled, there would be 12 million fewer full dustbins each year. **Recycle your batteries** - each person uses 10 batteries per year which amounts to 620 million batteries thrown away every year. At present, only 3% of these are recycled.
7. **Recycle newspapers** - Recycling a stack of newspapers just three feet high can save an entire tree.
8. **Green your supply chain** – Try to source goods and services from environmentally conscious firms.
9. **No more junk** - Make it a policy to remove your Trust from unwanted mailing lists. Request to receive catalogues via email ([www.mpsonline.org.uk](http://www.mpsonline.org.uk)).
10. **Keep your mobile phone for longer** - There is no need to replace your mobile phone every year; most will work for at least five years. Hanging on to your current phone can save you money, as the cost of a new handset is usually included in monthly tariffs. Ask your phone company about the different tariffs they have available if you don't upgrade your handset ('SIM only').



## WATER USE

In the UK, each person uses as much as 150 litres of water everyday - 60 litres of that water use is to flush the loo! Waiting for the tap to run cold when filling a glass with water can waste more than 10 litres a day. Food production uses a huge amount of water - more than 1,000 litres of water is needed to produce 1kg of wheat (used to make bread and pasta), around 3,000 litres of water is needed to produce 1kg of rice and 16,000 litres of water is needed to produce 1kg of beef.

1. **Swap to a water efficient shower** - Switch to an aerated showerhead. Without even noticing you will save on hot water and your heating bill.
2. **Don't linger in the shower** - Cutting a minute off your shower time every time, you could save about 3,300 litres of water a year and enough energy to make 16 cups of tea every day for a year. Heating water is responsible for 5% of your household's carbon footprint. Using hot water wisely is a cost effective way to cut your impact.
3. **Don't flush money down the drain** - If your water is metered, a dual-flush toilet could cut your water bill by 15%. Put a brick, a bottle filled with sand or a Hippo / Bog-Hog bag into your toilet cistern. This reduces the amount of water you flush down the toilet. Toilet flushing is 30% of your daily water use. That water is processed before it gets to you, which creates carbon emissions. Using less water to flush your loo means less carbon emissions.
4. **Collect free rainwater** - Enough rainwater falls on your roof in a year to fill three tanker lorries. Store some in your garden with a water butt and water your plants and wash your car for free. Processing water to drinking quality takes up 2-3% of all the UK's electricity consumption, emitting carbon. Using rainwater where you can will help reduce our carbon emissions.
5. **Choose A or A+ appliances** - Choose A or A+ rated washing machines and dishwashers and only pay for heating the exact amount of water you use. Only run your washing machine/dishwasher when full. An efficient dishwasher can use as little as 10% of the water needed to wash up in the sink. If you don't have a dishwasher, save water by boiling a kettle instead of running the hot tap until the water heats up. Pour the boiled water into the sink while running the hot tap and you'll have hot washing up water while being more water efficient. Fully loaded A or A+ appliances use less energy and water than lower-rated ones.
6. **Planting tips** - Enjoy a beautiful garden and use less water with drought resistant plants. Mulch bare soil to conserve moisture. Use a water saving mulch like pebbles, bark chippings or grass clippings to keep the moisture in the soil and slow down the beasties too. Invest in a watering can, that way you only use the water you need. More plants in your garden is great for wildlife and helps take more carbon dioxide out of the atmosphere.





## WATER USE

7. **Your lawn can help** - More water is lost through evaporation with a short lawn. Let the grass grow a little longer and have a greener, more luxurious lawn. Lift the blade on your lawnmower so that the grass is cut an inch or two longer so that its roots are shaded and retain water. Water in the evening when the sun has left your garden, this way the water won't evaporate instantly plus, wet leaves can be scorched by the sun. Choose lawn over paving, for your garden. Your lawn absorbs rainwater, which helps prevent flooding and takes carbon dioxide out of the atmosphere.
8. **Repair dripping taps** - A dripping tap wastes one drop per second (four litres per day) and up to 5,500 litres per year. Don't leave the tap running while you clean your teeth or shave, as you could be wasting up to 10 litres per minute. Fixing your dripping tap washer (a cost of a few pence) could save you over £18 a year.
9. **Hand wash cars** - Wash your vehicles by hand instead of with a pressure washer – high pressure washers use a lot of water. Wash your vehicle on the lawn and water the garden at the same time.
10. **Stop hosing it down** - Try to avoid using a hosepipe since it can use over 1,000 litres an hour – one person's water use for a whole week. Use a watering can instead and water early in the morning or late in the evening when evaporation rates are lowest. Your local water authority offer discounts on water butts.

Contact your local water authority to see what free water reduction technologies they have on offer.



## WEBLINKS

If you want to do any background reading relating to the any of these subjects, the links below will provide a full range of information:

2 degrees network	<a href="http://www.2degreesnetwork.com">www.2degreesnetwork.com</a>
10:10 campaign	<a href="http://www.1010global.org">www.1010global.org</a>
Carbon Addict	<a href="http://www.carbonaddict.org">www.carbonaddict.org</a>
Carbon Trust	<a href="http://www.carbontrust.co.uk">www.carbontrust.co.uk</a>
Environment Tools	<a href="http://www.environmenttools.co.uk">www.environmenttools.co.uk</a>
Energy Savings Trust	<a href="http://www.energysavingtrust.org.uk">www.energysavingtrust.org.uk</a>
Fairtrade Association	<a href="http://www.fairtrade.org.uk">www.fairtrade.org.uk</a>
Freecycle	<a href="http://www.freecycle.org">www.freecycle.org</a>
Freegle	<a href="http://www.ilovefreegle.org">www.ilovefreegle.org</a>
Get Composting	<a href="http://www.getcomposting.com">www.getcomposting.com</a>
Liftshare	<a href="http://www.liftshare.com/uk">www.liftshare.com/uk</a>
Love Food Hate Waste	<a href="http://www.lovefoodhatewaste.com">www.lovefoodhatewaste.com</a>
Marine Conservation Society	<a href="http://www.fishonline.org">www.fishonline.org</a>
Recycle Now	<a href="http://www.recyclenow.com">www.recyclenow.com</a>
Soil Association	<a href="http://www.soilassociation.org">www.soilassociation.org</a>
Sustrans	<a href="http://www.sustrans.org.uk">www.sustrans.org.uk</a>
Transport Direct	<a href="http://www.transportdirect.info">www.transportdirect.info</a>
Waste Online	<a href="http://www.wasteonline.org.uk">www.wasteonline.org.uk</a>
WRAP	<a href="http://www.wrap.org.uk">www.wrap.org.uk</a>

### **Greener Healthcare webpages**

Sustainable Development Unit for the NHS	<a href="http://www.sdu.nhs.uk">www.sdu.nhs.uk</a>
Greener Healthcare	<a href="http://sap.greenerhealthcare.org">sap.greenerhealthcare.org</a>
Sustainability for health	<a href="http://www.sustainabilityforhealth.org">www.sustainabilityforhealth.org</a>
Health care without Harm	<a href="http://www.noharm.org/europe">www.noharm.org/europe</a>
Health and environment	<a href="http://healthandenvironmentonline.com">healthandenvironmentonline.com</a>
Practise green health	<a href="http://www.practicegreenhealth.org">www.practicegreenhealth.org</a>
Mapping Greener healthcare	<a href="http://map.greenerhealthcare.org">map.greenerhealthcare.org</a>

If you have any questions or would like to make a suggestion as to how we can further green the ambulance services across the country, please send an email to your **Green Team on [xxxx@xxx.nhs.uk](mailto:xxxx@xxx.nhs.uk)**





## HOW CAN MY TRUST REDUCE MY CARBON FOOTPRINT

Please use this space to write down any ideas that you have in the ways in which your Ambulance Service can reduce their carbon emissions.



PLEASE SEND YOUR IDEAS TO **YOUR GREEN TEAM/CARBON HQ ON.....**

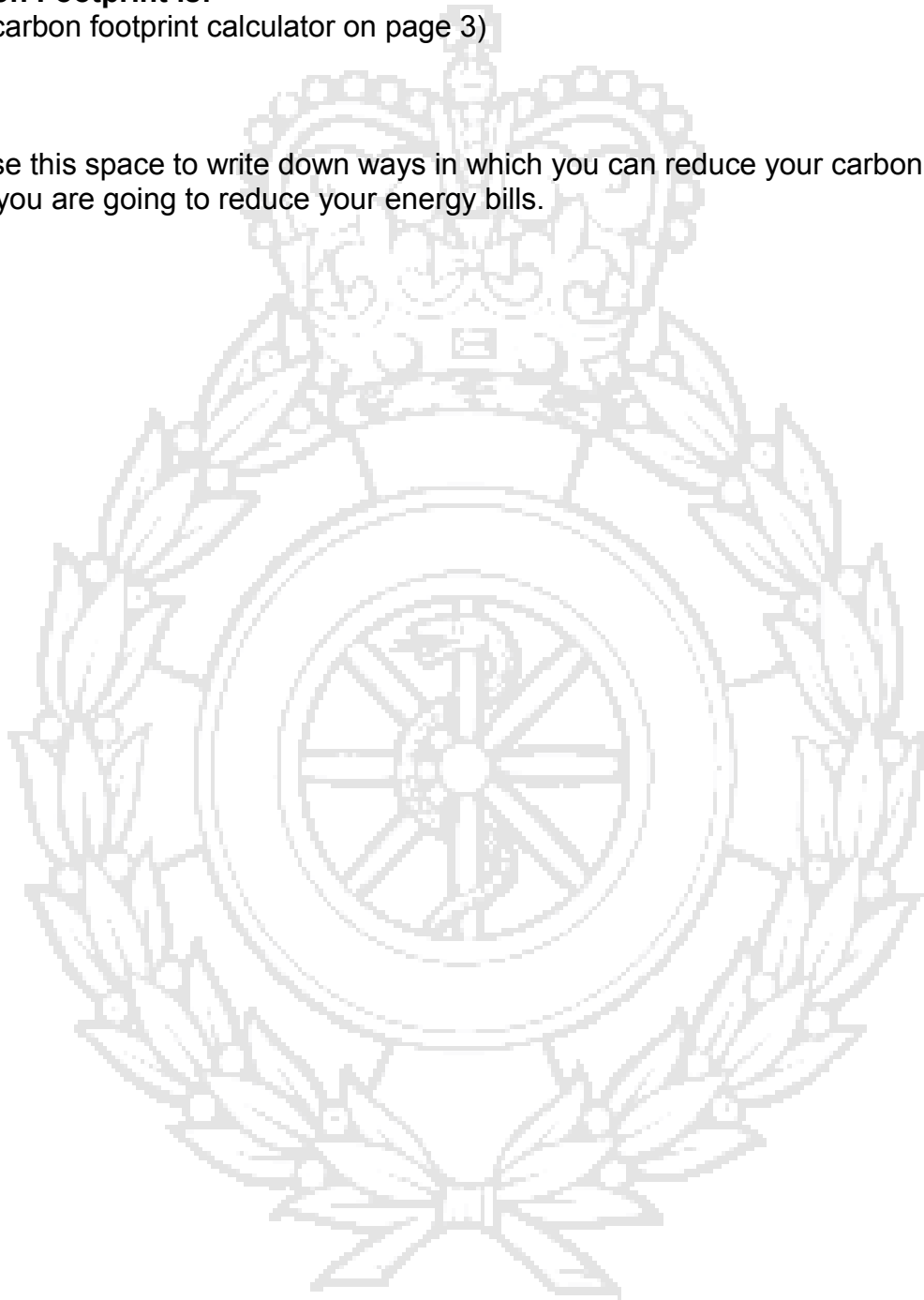


## MY PLEDGE TO REDUCE MY CARBON FOOTPRINT

### **My Carbon Footprint is:**

(use the carbon footprint calculator on page 3)

Please use this space to write down ways in which you can reduce your carbon footprint and how you are going to reduce your energy bills.

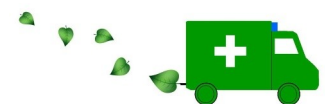


A joint carbon reduction initiative from all the Ambulance Services across Great Britain:



## Reduce Carbon – Improve Health

A GrEAN (Green Environmental Ambulance Network)  
Publication 2011



**GREENING THE  
AMBULANCE SERVICE**