Environmental Management

BRITISH SAFETY COUNCIL

June 2020

A guide to key duties and improving performance

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Introduction

Global efforts to fight climate change and increasing public pressure for businesses to act in a sustainable manner mean that organisations are increasingly taking steps to minimise the impact of their activities, products and services on the environment.

In fact, efficient use of resources – such as energy, natural materials, water, waste and transport – can aid legal compliance, lead to cost savings and enhance an organisation's reputation among its customers and others.

This guide provides an overview of some of the key UK environmental laws and rules affecting businesses. It also provides some suggestions for improving energy and water efficiency and becoming more resource-efficient.

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Editor

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In recent years, more-and-more businesses have come to realise that acting in an environmentally-responsible way has a positive effect on their bottom line, their reputation and society as whole.

Indeed, as well as benefiting the environment and helping to fight climate change, organisations that commit to reducing their greenhouse gas emissions – for example, by making more efficient use of resources such as energy, transport and water – can meet their corporate social responsibilities, comply with ever-stricter environmental laws and increase their appeal to customers, business partners and investors alike.

There are also sound financial reasons to improve environmental performance. For example, a suitable resource efficiency programme can lead to cost savings through more efficient use of raw materials and water and waste minimisation. Also, adopting energy efficiency measures can result in lower power bills for a building or site.

Indeed, the UK's Carbon Trust advice service says that most businesses can achieve meaningful cost savings through reducing their consumption of energy, such as electricity and gas, in their buildings and site processes. In its *Better business guide to energy saving*, it says experience shows that even low and no-cost energy-saving actions at the premises of small companies can usually reduce energy costs by 10 per cent.

Meanwhile, the resource efficiency advice service WRAP says poor resource efficiency – such as wasted raw materials and inefficient use of energy and water – could be costing businesses as much as four per cent of turnover. However, it says evidence shows that, by implementing materials reduction measures as part a part of a wider resource efficiency programme, businesses can often reduce this figure by a quarter.

This guide provides an overview of some of the existing and proposed legal duties requiring UK businesses to use resources more efficiently and to reduce their energy use. It also provides some basic advice on ways of achieving resource efficiency; preventing and managing waste; and saving energy.

It is based on guidance from organisations such as the Carbon Trust, WRAP and NetRegs, a government-backed environmental advice service for businesses in Scotland and Northern Ireland. See the 'further information' section for sources of additional help.

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Low-cost energy-saving steps can reduce energy costs by 10 per cent.

Some facts and numbers

0.87°C

higher average global surface temperature during the decade 2006–2015 compared to the second half of the 19th century[2]

10–15%

possible reduction in the amount of water available in some areas of the UK by 2050 as a result of climate change[3]

221m

tonnes of waste generated in total in the UK in 2016[3]

25%

of UK greenhouse gas emissions are generated from business activities[1]

Sources: 1) UK government; 2) IPPC; 3) NetRegs; 4) DEFRA

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Ways of reducing carbon emissions from transport include purchasing and using electric-powered vehicles.

Climate change

The UK government says that there is clear evidence to show that climate change is happening. It says the great majority of scientific evidence, built up over many years, shows that the planet is warming and that human activity is the main contributor to this warming.

According to the UK government, measurements show that the average temperature at the earth's surface has risen by about 1°C since the pre-industrial period, showing that the climate is warming in the long-term. Rising levels of greenhouse gases, such as carbon dioxide (CO2) and methane, in the atmosphere are creating a 'greenhouse effect', trapping the sun's energy and causing the earth, and particular the oceans, to warm. The government says that recent climate change is happening largely as a result of this warming, and that levels of CO2 have increased by about 45 per cent since before the industrial revolution. It adds that all the scientific evidence shows that this increase in greenhouse gases is almost entirely due to human activity, mainly due to the burning of fossil fuels for energy, emissions from agriculture and deforestation, and emissions from industrial processes such as the manufacturing of cement and metals.

The government says that, along with the warming at the earth's surface, many other changes in the climate are occurring, including warming oceans, melting polar ice and glaciers, rising sea levels and more extreme weather events.

For example, around 90 per cent of the

additional energy trapped in the climate system by raised greenhouse gases ends up in the oceans, causing them to warm up and expand. This, together with melting ice on land, is contributing to rising global sea levels, posing a flooding risk. In fact, the global sea level has risen by around 20cm over the past century, which is thought to be a faster rate than at any point in the last 2,000 years.

The government also warns that more damaging extreme weather events are being seen around the world. For example, it says that heatwaves have become more frequent and are lasting longer, and the height of extreme sea levels caused by storms has increased. It adds that global warming is also expected to cause more intense, heavy rainfall events, and in North America and Europe, where long-term rainfall measurements exist, this change has already been observed.

The government warns that, although we can already see the impacts of climate change, they will become more severe and widespread as temperatures rise. It adds that how great the impacts will become depends on the world's success in reducing greenhouse gas emissions.

For example, the government says that even if global temperature increases are limited to 2°C above pre-industrial levels there will be impacts for the UK. In a 2°C world in the UK, it says there could be a 30 per cent decrease in river flows during 'dry' periods, a 5-20 per cent increase in river flows during 'wet' periods and between 700 and 1,000 more heat-related deaths per year in South-East England compared to today. If global temperatures rise by a 4°C above the pre-industrial levels, the government says the impact on the UK may be increasingly severe and may not be avoidable through adaptation measures. For example, it warns that damage caused by river, coastal and surface water flooding will all increase markedly with 4°C of warming.

The UK government warns of a number of major global impacts if global temperatures continue to rise. For example, it says that increased temperatures, changes to rainfall patterns and an increased risk of extreme weather events will all negatively affect the production of major food crops such as wheat, rice and maize. This could potentially create a growing gap between food demand and supply. It also warns that globally, heatwaves and droughts are expected to become more common and more intense over the coming century, and more frequent heavy rainfall events and rising sea levels will increase the levels of floods. As a result, the number of deaths due to temperature extremes and the amount of people at significant risk from flooding are both expected to increase in the future.

The UK government's climate change risk assessment in 2017 said there is compelling evidence that climate change may lead to increases in heavy rainfall and subsequent flooding from UK rivers and surface water in the coming years, posing risks to homes, businesses and the supply chains upon which the economy relies. It adds there are also likely to be heightened risks to health, wellbeing and

productivity from higher temperatures – for example, by buildings becoming uncomfortable in high temperatures and risks of water supply shortages due to water scarcity.

In a bid to set the world on track to avoid dangerous climate change, the international community has made commitments to cut carbon emissions to limit the rise in global average temperatures. Most recently, the Paris Agreement of 2015 under the United Nations Framework Convention on Climate Change saw hundreds of countries pledge to reduce their greenhouse gas emissions as part of a legally-binding global deal. The aim is to limit the increase in global average temperature to well below 2°C above pre-industrial levels and to pursue efforts towards limiting the increase to 1.5°C.

In 2019, the UK government s et a legally binding target requiring the UK to end its contribution to global warming by 2050. This requires the UK to bring all greenhouse gas emissions from across the UK economy to 'net-zero' by 2050.

The Committee on Climate Change (CCC), an independent body that advises the UK government on the progress being made in reducing greenhouse gas emissions, says that, for the UK to reach the target of net zero emissions, extensive changes will be required across the economy. These include an increase in resource and energy efficiency – to reduce the demand for energy across the economy; and extensive electrification, particularly of transport and heating, supported by a major expansion of renewable and other low-carbon power generation.

The Carbon Trust says that businesses have a key role to play in making the transition to a zero-carbon world, by reducing the greenhouse gas emissions associated with their operations and supply chains. However, it adds that businesses will also be able to access new commercial opportunities through delivering products and services that are compatible with a prosperous, zero-carbon future.
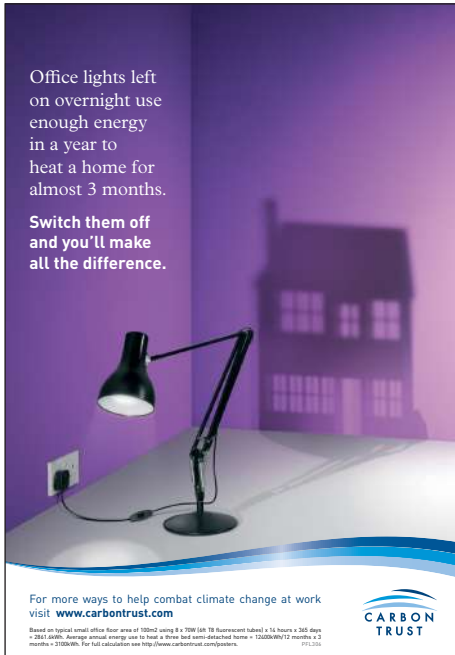
Reducing carbon emissions

Since the majority of the UK's greenhouse gas emissions arise from our production and consumption of energy, in recent years the UK government has introduced various laws, taxes, initiatives and campaigns to help the country become more energy efficient and reduce carbon emissions arising from energy use.

In terms of measures aimed at business, they consist of a mix of financial penalties, incentives and energy usage reporting requirements to encourage businesses both to reduce their energy use and adopt and implement energy-efficient technologies and practices.

For example, the climate change levy is a tax on energy use by business that is added to the costs of most electricity, gas and solid fuel to encourage energy efficiency. The levy is applied to all power bills for business, though there are some exemptions and reliefs. For example, certain businesses that use small amounts of energy do not have to pay

Free guidance:
Organisations such as the Carbon Trust, NetRegs and WRAP provide free guidance on environmental management and sustainability.

Office lights left on overnight use enough energy in a year to heat a home for almost 3 months.

Switch them off and you'll make all the difference.

For more ways to help combat climate change at work visit **www.carbontrust.com**

Based on typical small office floor area of 100m2 using 8 x 70W (6ft T8 fluorescent tubes) x 14 hours x 365 days = 2861.6kWh. Average annual energy use to heat a three bed semi-detached home = 12600kWh/12 months x 3 months = 3100kWh. For full calculation see http://www.carbontrust.com/posters.   PFL306

The Carbon Trust's guidance is at:
www.carbontrust.com

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The climate change levy is a tax on energy used by business.

the main rate of CCL on certain power supplies, and many energy-intensive industries can receive a discount if they agree to meet energy efficiency targets set in climate change agreements with the relevant regulator. The CCL is designed to encourage businesses to become more energy-efficient, since they can reduce the amount of the levy they pay by reducing their energy use.

Also, the Energy Savings Opportunity Scheme (ESOS) requires certain large businesses in the UK to carry out an assessment (i.e. audit) of the energy used by their buildings, industrial pro-cesses and transport every four years to identify cost-effective energy saving measures.

In general terms, ESOS applies to large UK businesses which met the scheme's definition of a 'large undertaking'. This is:
- Any UK company that either employs 250 or more people; or has an annual turnover in ex-cess of €50m and an annual balance sheet total in excess of €43m
- An overseas company with a UK-registered establishment which has 250 or more UK em-ployees (paying income tax in the UK).

If an undertaking or company is part of a corporate group that includes another UK undertaking or establishment that meets the above criteria then that business must also comply with the ESOS scheme. In short, businesses covered by ESOS must:
- Calculate their total energy consumption for buildings, industrial processes and transport
- Conduct energy audits to identify significant areas of energy

consumption and cost-effective energy saving opportunities

- Appoint a 'lead assessor' to carry out and oversee or review their energy audits and ESOS assessment
- Notify the relevant national scheme administrator that they have undertaken an ESOS assessment and have complied with their obligations under the scheme.

The UK government hopes that measures such as the ESOS requirements will encourage businesses to implement energy efficiency measures and other steps to reduce their greenhouse gas emissions, such as reducing emissions from transport operations. It hopes this will help the UK make the transition to a low carbon economy.

The circular economy

To support the move to a low-carbon economy and reduce the impact of human activity on the environment, the UK government is also taking steps to move the economy away from the 'take, make, use and throw' linear model of using resources and creating waste to a more circular economic model.

The government says the traditional linear economic model of 'take, make, use and throw' is using up scarce resources, causing harm to the environment and contributing to climate change. For example, it says extracting and producing natural materials for use in products and processes is depleting valuable resources and creating carbon emissions. Also, landfilling materials that we longer

want means those materials are lost from society and may also be creating greenhouse gases themselves – for example, from food waste in landfill.

In essence, a circular ecomony means using resources – such as raw materials used to create products and services – more efficiently and reducing the amount of waste we create as a society.

In a circular economy, the amount of resources and materials required to produce goods and services is minimised; products and materials are kept in high-value use for as long as possible to extract the maximum value from them; and products are recovered and regenerated at the end of their life when possible to give them a new lease of life.

The idea is to cut waste and its harmful impact on the environment; reduce carbon emissions from the use of resources and waste disposal; and boost the economy – for example, by making businesses more resilient to the rising costs of both raw materials and waste treatment.

To move to a circular economy, the UK government has implemented and proposed a variety of measures aimed at encouraging more efficient use of resources, minimising waste and en-couraging re-use and recycling, which will have an impact on UK businesses. The aim is to work towards eliminating avoidable waste (i.e. zero avoidable waste) by 2050.

For example, the government is considering whether producer responsibility schemes could be extended to cover additional products and materials. Under these schemes,

By recycling unwanted waste materials, businesses can reduce the amount of waste that is sent to landfill and ensure that society obtains maximum value from the raw materials used in products.

producers are required to meet some or all of the costs of managing their products at the end of their life, when they need to be disposed of. An existing example is the duty on some businesses that make, handle or use packaging to ensure that specific tonnages of their packaging wastes are recovered and recycled. The government says that the possible introduction of additional producer responsibility schemes for other products and materials will incentivise producers to design their products with re-use and recycling in mind, because those that make their products easier to recycle will pay less under the scheme.

As part of measures designed to reduce food waste, the government is planning to introduce a new legal duty for businesses in England that produce sufficient quantities of food waste to separate their food waste and present it separating for recycling or composting. Certain businesses in Scotland and

Northern Ireland are already required to separate their food waste for collection. See the later section of this guide.

Environmental management

The best way to comply with environmental laws and reduce an organisation's impact on the environment is to implement an effective environmental management system (EMS) . This involves systematically identifying ways of increasing resource efficiency, reducing carbon emissions and preventing pollution, and taking steps reduce the risks that the organisation's activities pose to the environment.

The scale of the EMS will depend on the organisation's size, scale, risks, operations and environmental impacts, but as a general rule an EMS should:
• Ensure compliance with environmental legislation and permits
• Ensure employees are competent to

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manage environmental risks

- Include an effective environmental policy which sets a clear direction for the organisation to follow
- Include realistic targets and objectives for improving environmental performance and sustainability.

When establishing an EMS, organisations should review their activities, processes, products and services to identify the environmental duties that apply and areas for improvement. The review should examine the entire organisation, including the work processes; raw materials and energy used; the waste produced; the sustainability of the products and services; potential pollution threats; emissions from vehicle fleets and the environmental credentials of the company's supply chain.

Typical areas to consider include:

- Which environmental legislation applies to the organisation?
- Is there a clear written environmental policy with the correct management structures to implement it?
- How much energy and resources, such as electricity and water, are used?
- What amounts and kinds of raw materials are used in the products and processes, can the amounts be reduced, and how much of these materials are reused or recycled?
- Are products produced and offered by the organisation designed for durability, longer life, easier upgrading, reuse and recycling at the end of their life?
- What wastes are produced by the business, how are they managed and at what costs
- What opportunities are there to prevent waste, or reuse, recycle or recover it?
- What are the sources of emissions and how can they be reduced?
- How efficient is the transport of goods and employee travel?
- Are staff provided with environmental awareness training?

Measures should then be taken to ensure legal compliance and to improve environmental performance . Staff should also be given suitable information and instruction on issues such as waste minimisation, energy saving and pollution prevention; and there should be management leadership and commitment to ensuring high standards of environmental performance.

Energy efficiency

An important aspect of reducing an organisation's environmental impact is taking steps to become more energy efficient. Since the majority of the UK's greenhouse gas emissions arise from our production and consumption of energy – for example, when manufacturing goods or heating premises – the UK can cut its carbon emissions by becoming more energy efficient and switching to low carbon fuels, such as renewable electricity generated by wind and solar power.

The Carbon Trust says that most businesses can achieve meaningful cost savings through reducing their energy consumption. It says that experience

shows that even low and no-cost actions can reduce a company's energy costs by at least 10 per cent.

The approach an organisation should take to saving energy will differ according to its size, industry and complexity. However, in its introductory guidance leaflet, *Better business guide to energy saving*, the Carbon Trust sets out a simple approach for anyone new to energy saving, particularly in smaller businesses. In essence, it suggests looking at areas such as lighting, heating and office, factory and warehouse equipment to identify where and how energy is used, situations where energy is being wasted and opportunities for savings.

The guide also suggests reviewing energy invoices and regularly taking meter readings to build a picture of energy performance and to help identify when and where energy is being wasted. Both the Carbon Trust and NetRegs also stress the benefits of encouraging all staff to get involved in spotting energy wastage and suggesting and implementing energy-saving measures. The Carbon Trust says involving staff in making decisions about energy-saving will help to ensure that employees are on-board and incentivised to reduce their energy consumption at work.

Some practical ideas for saving energy in various industries, based on guidance from the Carbon Trust's Better business guide to energy saving and from NetRegs – see **tinyurl.com/yxfgdocp** – include:
- Keep doors and windows closed when the heating or air conditioning is running

- Prevent as much heat loss as possible by improving insulation and draught control – for example, by fitting draught excluders and sealing up windows and doors that are no longer used
- Consider heating the building in zones to allow for heating to be adjusted for each area. Areas such as storerooms and corridors, or areas where there is a high level of physical ac-tivity, will generally require less heat
- Thermostats should generally be set at 19-20°C for heating a premises, but in some envi-ronments, such as in a warehouse where people are active, the air temperature may not need to be heated as high
- Ensure boilers are serviced at least annually and adjusted for optimum efficiency – heating costs can increase by 30 per cent or more if the boiler is poorly operated or maintained, according to the Carbon Trust
- Ensure heating-control thermostats are accurate by placing them away from draughts and direct sunlight and at a suitable distance from any heating sources
- Use seven-day timers to allow the heating to be turned off or down during regular unoccu-pied periods
- Insulate all hot water tanks, boilers, valves and pipework unless they provide useful heat to occupied spaces
- Keep windows and skylights clean to maximise the amount of natural light and minimise the amount of artificial lighting that is required
- Label light switches where necessary so staff only turn on the lights they need

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- Consider installing presence (movement-triggered) and daylight sensors to turn the lights on and off automatically
- Replace traditional lighting units, such as older fluorescent lighting installations, with energy-efficient Light Emitting Diode (LED) units, which have a longer life, lower maintenance costs and can be up to 80 per cent more efficient
- Switch off office equipment out-of-hours – for example, by fitting seven-day timers to ensure that equipment such as printers and water chillers are turned off overnight and at weekends
- Turn off computer monitors when not in use – for example, during lunch breaks – and ensure the energy-saving (standby) modes are activated
- Place photocopiers in areas that are naturally ventilated where possible, to help avoid the need for any air conditioning plant to compensate for the associated heat gain
- Activat the energy-saving mode where available on printers and copiers, as this will allow the machine to power down after a set time period
- Install automatic doors at the entrances to buildings, such as retail premises, to prevent heat escaping
- Ensure that doors to refrigerated areas are kept closed
- For refrigerated cabinets consider fitting PVC curtains or night blinds to prevent warmer air entering the cold space
- Maintain the efficiency of freezers by defrosting them regularly to prevent the build-up of ice

- Check for leaks in compressed air systems used in environments such as factories and repair them immediately
- Make maximum use of cheaper electricity rates.

Reducing transport emissions

Businesses should also seek to cut carbon emissions from their transport activities and business travel. Emissions from vehicle exhausts, such as carbon dioxide, contribute to climate change and are a significant source of air pollution, which poses a major risk to public health.

However, businesses can make financial savings by reducing their business travel and vehicle use. For example, choosing vehicles that are more environmentally friendly and using them more efficiently can lead to financial savings through reduced fuel costs.

There are a variety of measures that businesses can take to reduce carbon emissions and air pollution from their transport operations and business travel. Tips suggested by NetRegs include:

- Educating employees about the environmental impacts of transport and encouraging them to walk, cycle or use public transport for commuting and business travel
- Taking advantage of the government's cycle to work scheme and encouraging staff to cycle to work
- Encouraging employees to work from home or to work flexible hours to reduce the use of vehicles for business travel and commuting
- Reducing the need for transport

The water supply to most premises is metered – meaning the more a business uses the higher the cost.

journeys by considering if face-to-face meetings could be replaced by video or telephone conference calls or if meetings in the same area can be arranged for the same day
- Using meeting venues that are easily accessible by public transport
- When buying, leasing or hiring new company vehicles, selecting models with high fuel ef-ficiency and the highest emission standards both for air pollution and carbon dioxide emissions
- Considering using vehicles powered by alternative fuels, such as LPG, or electric hybrids or full electric vehicles, as these generally produce less CO2 and air pollutants than those that run on petrol or diesel

- Improving the driving skills of staff and helping them to develop more efficient driving techniques
- Ensuring that vehicle fuel is used more efficiently by adopting measures such as maintaining vehicles to make sure that they are running as efficiently as possible and keeping tyres inflated to the correct pressure
- Pre-planning delivery routes to maximise the efficient use of vehicles
- Considering the journeys that suppliers of goods and services make to and from the premises – for example, buy and hire products and services from local suppliers to reduce the distance that goods and materials have to be transported.

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Moving to the circular economy

As stated, the government wants the UK to become a 'zero waste' society with a circular economy. It therefore wants businesses to seek to maximise resource value and minimise waste when designing products and services; and to consider the environmental impact of a product or service at every stage of its lifecycle, both when designing and when purchasing or hiring it.

NetRegs provides tips for businesses on how to design products, processes, systems and business models so materials are used efficiently and are kept circulating in the economy. For products and processes, these include:

- Make waste prevention a key design criterion
- Seek to make the product more simply – for example, by cutting the number and amount of materials
- Design out non-renewable materials – for example, by using bio-based products as an alternative to fossil-fuel products
- Design in recyclable materials
- Design products for a longer lifetime and which are supported by a guarantee and trusted repair services
- Design products ready to be disassembled, economically repaired and eventually recycled
- Minimise the amount of packaging used while still ensuring an adequate level of protection for the product, and ensure that packaging can be re-used or recycled
- Consider taking back products at end of their life, so they can be refurbished

for a new marketplace, valuable materials can be recovered from them or they can be recycled.

NetRegs says that, when purchasing goods and services, businesses should consider the impact they pose on the environment, human health and social conditions. For example, choosing products and services that use recycled materials will help save natural resources, and buying products that can be re-used and recycled will reduce the amount of waste sent to landfill – and potentially save the purchasing company money through lower waste disposal costs.

General tips on buying environmentally-friendly products and services, taken from the NetRegs guidance at tinyurl.com/yb7rrc2a, include:

- Consider the product's environmental impact – for example, what resources are used during its manufacture – such as energy and water; whether it uses hazardous substances; how much packaging it uses; and the distance the product or service will be transported to reach your business
- Consider all costs linked with the product (known as whole-life costs), including raw materials, manufacture, maintenance and disposal, not just the costs of buying it
- Consider if it is better to buy a more expensive product or service initially to reduce the whoe- life costs in the long term – sustainable products may last longer, use less energy, water and materials, produce less waste and cost less to dispose of at the end of their life
- Work with suppliers to help them

develop and improve their own environmental performance – for example, by helping them to develop am improved, lower carbon product or service, and to reduce their use of materials and resources – such as using less packaging for their goods.

Resource efficiency

When seeking to minimise and manage their use of resources and waste, businesses should remember they have a legal duty to follow the waste hierarchy.

Under the hierarchy, businesses must take all reasonable measures to prevent the creation of waste whenever possible. However, if this is not possible, they should prepare their waste for re-use or, if that is not practicable, recycle it. Businesses should also consider other ways to recover value from their waste, such as sending food waste for anaerobic digestion, which can produce biogas that can be burned to produce electricity. Finally, after attempting the above measures, they should arrange for disposal as a last resort, such as sending waste for landfill.

The most environmentally-friendly method of dealing with waste and supporting the move to a circular economy is to prevent or cut the amount of waste that is produced by a business.

Ideas for preventing or reducing waste, as suggested by NetRegs, include:
- Consider if there are ways to avoid purchasing products – for example, by re-distributing IT equipment within the business

- Look for easy wins – such as printing and photocopying double-sided and refilling printer cartridges
- Improve storage and stock control to help reduce waste and only buy what is required – for example, by adopting 'just-in-time' stock control
- Buy longer lasting products – for example, consider the product's lifespan, durability and whether it can be repaired, since replacing equipment less often will reduce the amount of waste created
- Use only the required amount of packaging to achieve a suitable level of protection for the company's own products
- Buy equipment in bulk where appropriate to reduce the amount of packaging used
- Avoid disposable products – for example, by using china plates and cups instead of paper or plastic and using rechargeable batteries
- Buy products that have separate parts and can be repaired more easily – for example, use carpet tiles instead of sheet carpet as individual tiles can be replaced at lower cost.

Next, businesses should seek to re-use materials and equipment, either in their own business or by offering them to other organisations. Re-use retains the inherent value of the materials and requires no reprocessing of the product. This makes it a better option for the environment than recycling, which involves breaking the product down and remaking the same thing or producing something else. Re-using materials and goods also reduces

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the use of virgin materials and energy; and the air and water pollution associated with the extraction of, processing and manufacture of those raw materials. An organisation may also be able to generate income from materials and goods that are valuable to another organisation.

Common items that can be re-used by a business itself include:
- Paper – waste paper can be used as note paper, envelopes can sometimes be re-used and used paper can be shredded for use as packaging in-fill
- Packaging waste – boxes, cartons, bubble wrap, packing chips, pallets and crates can often be re-used.

Meanwhile, a business may be able to offer its waste materials, second-hand products products and obsolete equipment to other organisations who can make sure of them – for example, through online waste exchanges.

To support the move to a circular economy, NetRegs says that businesses should also consider repairing items and equipment before buying new ones.

Recycling waste

Having taken steps to eliminate, reduce or re-use waste, or to repair items or purchase remanufactured ones, a business should then give attention to recycling its waste materials.

Recycling is the next best waste management option, after reducing and re-using waste. It is less beneficial to the environment than re-use because energy and resources are needed to process the waste before the materials are used again. Also, recycling often retains less of the value of the material and product. However, recycling is important because it reduces the need to use new raw materials, prevents the waste of potentially useful materials and reduces the amount of waste that is sent to landfill.

Many types of materials produced, used and handled by a business can be recycled, including:
- **Packaging** – including cardboard boxes
- **Metal and glass** – from process waste and food and drink containers
- **Paper** – after it has been re-used as scrap
- **Textiles** – from process waste and refurbishment
- **Wood** – from process waste and damaged pallets
- **Food waste** – such as from staff canteens
- **Electrical and electronic equipment** – such as computers, fridges, freezers
- **Metal foil, paint, batteries and mobile phones**
- **Construction waste**.

To make it easier to reuse, recover or recycle wastes, businesses should sort and store them separately whenever possible – for example, by using clearly labelled containers or areas for different waste types. Separating waste that can be recycled from other waste and avoiding contamination of the recyclables is also important as a high quality of recyclate is required to enable more materials to be returned to the same use.

It is important to note that many food-producing businesses in Scotland and

Northern Ireland are legally required to separate their food waste for collection. A food business is defined in both countries as any business that carries out "activities relating to the processing, distribution, preparation or sale of food". This includes restaurants, cafes, hotels, pubs that serve food, shops that serve food, supermarkets, schools, prisons, nursing homes, hospitals and staff canteens where food is prepared, sold and consumed. However, the rules do not apply to businesses that only prepare and sell drinks, or premises used to consume food brought from elsewhere – such as an office where staff bring in food for their personal consumption.

In Scotland, the duty to present food waste separately for collection applies to any food business which produces over 5kg of food waste per week, unless it is located in a rural area. In Northern Ireland the duty to present food waste separately for collection applies to any food business which produces over 5kg of food waste per week and there is no exemption for rural businesses.

Since the disposal of waste in landfill sites is the least sustainable waste management option, it is the last option to consider under the waste hierarchy.

Businesses should also remember that they have a legal 'duty of care' to take all reasonable steps to keep their waste safe, ensure it is dealt with responsibly and only given to businesses authorised to deal with it. The aim is to ensure the waste does not harm the environment – for example, by ending up flytipped.

Reducing water use

Another aspect of resource efficiency that businesses should consider is water usage and wastewater disposal.

The water supply to most commercial premises is metered – meaning the more a business uses the higher the cost. There are also 'hidden' financial costs associated with water use., such as the cost of energy used to heat and deliver water in and around a building.

In recent years demand for water in the UK has risen steadily, and water supply prices have also increased. Future climate change – with a predicted trend towards lower average rainfall in some areas – and population growth, are expected to further increase the pressure on UK public water supplies.

Using water, especially hot water, uses energy and causes emissions of greenhouse gases which contribute to climate change. Using water more efficiently will also help to reduce the amount of water taken from rivers and aquifers, protecting water resources and the wildlife that live in these areas.

Although the appropriate water efficiency measures will differ from site-to-site and sector-to-sector, general tips from NetRegs and Waterwise include:

- Protecting against cold water leaks by insulating pipes
- Investigating alternative water sources – for example, using a water butt to harvest rainwater for tasks such as vehicle washing and re-using wastewater from wash basins and taps, for instance to flush toilets
- Fitting water-minimising controls,

Environmental Management

such as push-controlled or sensor-triggered taps, low-flush toilets and aerated showerheads

- Retrofitting water displacement devices into the cisterns of toilets to reduce the amount of water required for each flush
- Educating employees on the importance of water-efficiency measures – for example, the importance of reporting water leaks.

Having implemented an environmental management system, it is vital all staff receive information and training on their environmental responsibilities and the reasons why they should act in an environmentally-friendly manner.

Senior management should lead the way and set an example, and employees should be encouraged to suggest ways of further improving the organisation's environmental performance and given feedback on progress made – such as reductions in energy bills.

Finally...

Implementing an effective environmental management system can help businesses reduce the amount of raw materials they use, the level of waste they produce and their use of energy and water. This will benefit the environment.

And with waste disposal, energy and water costs all set to keep rising, implementing an effective resource, waste and energy efficiency programme system can reap financial savings, increasing the company's competitiveness and long-term prospects.

Get the poster:
Remind workers to avoid or miminise printing at work.

To purchase posters go to:
www.britsafe.org

Related posters:

Recommended reading

Carbon footprinting

Better business guide to energy saving

Effective energy management for business

Commissioning an energy efficiency project

How to be a good supplier: Managing energy issues

Energy saving guides for agriculture; green events; hospitality sector; manufacturing; office-based companies; retail sector; warehousing and logistics

Energy efficiency guides on building fabric; electric and smart vehicles; energy storage; heat pumps; heating, ventilation and air conditioning; lighting; motors and drives; office equipment; renewable energy sources; and refrigeration

Implementing energy efficiency for a start-up

Energy management self-assessment tool

SME carbon footprint calculator

SME energy benchmark tool

SME lighting business case tool

SME fleet upgrade tool

Employee awareness on energy saving – posters and stickers

Practical steps for reporting on greenhouse gas emissions guide

The Carbon Trust guide to ESOS

The above publications and tools are available from the Carbon Trust's website at:
carbontrust.com

Your guide to environmental management systems

Waste mapping: Your route to more profit

Your workplace without waste toolkit (employee engagement programme for tackling food and packaging waste in a business)

Packaging optimisation for SMEs

Driving out waste in food and drink manufacturing and retailing

Your business is food: Don't throw it away toolkit (hospitality and food service businesses)

Case studies: waste prevention in action in food and drink companies

Waste prevention toolkit – helping hospitals to cut food waste

The above publications, webpages and toolkits can be found on WRAP's websote at:
wrap.org.uk

Comply with the Energy Savings Opportunity Scheme (ESOS) – Environment Agency guidance
tinyurl.com/p9g4ad9

Further information

British Safety Council
Offers environmental training courses for staff and managers. Also offers environmental auditing services for businesses wishing to improve their sustainability performance.

www.britsafe.org

Carbon Trust
Organisation that provides advice, guidance and services to help businesses cut their carbon emissions and costs. This includes services, tools and guidance on improving energy efficiency.

www.carbontrust.com

Department of Agriculture, Environment and Rural Affairs for Northern Ireland
Government department for Northern Ireland that provides online advice to business on how to comply with environmental legislation.

www.daera-ni.gov.uk

Edoc
Online system that allows waste producers (businesses) to create waste transfer notes covering removal of non-hazardous waste from their sites by waste contractors.

www.edoconline.co.uk

Natural Resources Wales
Welsh environmental regulator. Website provides guidance for businesses on how to comply with environmental legislation and acheive best practice around sustainability.

www.naturalresources.wales

NetRegs
Partnership between the Northern Ireland Environment Agency and Scottish Environment Protection Agency (SEPA) that provides free online environmental management and sustainability guidance for small and medium-sized businesses in Northern Ireland and Scotland.

www.netregs.org.uk

Scottish Environment Protection Agency
Scottish environmental regulator. Website provides a wide range of guidance for businesses on legal compliance and best practice.

www.sepa.org.uk

WRAP (Waste Resources and Action Programme)
Registered charity that works with governments, businesses and communities to deliver practical solutions to improve resource efficiency. WRAP aims to help accelerate the move to a sustainable, resource-efficient economy by re-inventing how we design, produce and sell products; re-thinking how we use and consume products; and re-defining what is possible through re-use and recycling.

WRAP provides guidance and advice to business and industry on various aspects of resource efficiency, waste minimisation and water efficiency. WRAP's priority sectors are food and drink; clothing and textiles; and plastics.

wrap.org.uk

Zero Waste Scotland's Energy Efficiency Business Support Service
Scottish-government funded body that provides businesses in Scotland with free advice and technical support on becoming more energy efficient and ways of reducing their carbon footprint.

https://energy.zerowastescotland.org.uk

Talk to the industry.
Advertise here.

Reach your clients and peers. Share your products, campaigns, events and job offers. Opportunities in print magazine, website, e-newsletter, solus alerts and safety guides.

Media Pack available at:
sm.britsafe.org

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