Office Sustainability Guide

At AIB, sustainability is a key pillar of our strategy.

As a financial institution at the heart of the economy, we recognise that the scale and impact of our business gives us a responsibility to the wider economy and society. We have committed to do more to help ensure a greener tomorrow, by backing those building it today.

AIB has a target to achieve Net Zero in our own operations by 2030 and an ambition that green/transition lending will account for 70% of overall new lending by 2030, with a target to achieve Net Zero in our financed emissions by 2040 for our lending portfolio (2050 including agriculture).

To support our customers on their own sustainability journey, AIB is releasing a series of sector specific sustainability guides. These guides aim to provide practical tips and information which can be used by businesses to transition their operations to a more sustainable footing.

This series has been produced in partnership with Mabbett, a leading environmental consulting and engineering firm.

Office sustainability guide

Businesses which trade from offices can operate across a wide variety of sectors and sub-sectors including those trading in financial, business and legal services and those which support entities operating in transport and logistics.

Operations can vary dramatically, ranging from small teams to large multi-site corporations with hundreds of employees. As a result, there is no one-size-fits-all approach to addressing sustainability in this area; as businesses within this space face different challenges and opportunities.

Operating sustainably has become increasingly significant for many reasons including attracting clients and staff in addition to controlling risks and costs. Improving resource efficiency makes complete business sense – it saves money, boosts business reputation, and helps to reduce environmental effects, slowing down the impact of climate change. Rising inflation is having a significant impact on the profitability of many businesses across Ireland, therefore financial savings gained from adopting a more sustainable approach can make a significant difference.

Making meaningful changes to established daily working practices can be easier said than done. One of the aims of this guide is to support office based businesses to understand the benefits of maximising resource efficiency and supporting them in doing so.

Key benefits

Financial savings – both long and short term

Improving the efficiency of resource use not only saves money on bills and purchasing costs, but it can reduce 'hidden' costs such as energy, labour and waste management, making a difference to the bottom line.

Good for the environment, good for business

Clients are increasing the pressure on their suppliers to follow an ESG (Environmental, Social, Governance) agenda to align with their sustainability goals. Having a strong sustainability agenda can make you a thought leader and bring more clients through your doors.

Reduced carbon footprint

Better resource efficiency could see you reduce your business's carbon footprint. This can support future proofing your business, in line with government legislation such as The Climate Change Act (Northern Ireland) 2022[1] and path to Net Zero emissions.

Enhances supply chain stability

Improved sustainable sourcing can reduce demand on materials and shorten the supply chain, enhancing resilience in the face of wider supply chain instabilities.

This guide looks at some key resource intensive areas for office based businesses, including energy, waste, green procurement, water, IT equipment, transport, and social sustainability. For each topic, we identify common 'hot spot' issues and share some ideas for how you could enhance the sustainability performance of your business.

[1] https://www.legislation.gov.uk/nia/2022/31/contents/enacted

Energy

Energy is one of the biggest utility expenses for office based businesses. The first step in working out how best to improve energy efficiency in your operations is to identify:

- Key business areas that require energy.
- How much energy is being consumed (electricity, gas, and oil consumption is available on your bills, meter readings, and expense receipts.)

Global energy prices have been increasing since late 2021 when economies began opening up after pandemic-related lockdowns[2]. Enhancing energy efficiency in your workplace provides a solution to this real-time change and revolves around optimising the energy that is being used, without compromising the comfort and safety of staff and visitors.

Whether you are a business owner, office manager, or staff member, this guide will equip you with valuable insights to make informed decisions, prioritise energy-saving initiatives, and create a greener future for your business.

Hot spot areas for energy efficiency opportunities

Heating

Heating is often the largest energy cost in a workplace, accounting for as much as 40% of energy use in a non-domestic building3. With energy costs having increased significantly, this means prioritising the enhancement of space heating and water heating efficiency becomes crucial for office managers seeking to reduce energy costs. The following actions are helpful to consider when aiming to improve heating efficiency in your workplace.

Space heating

Thermostat control

- **Optimum temperature:** Utilise optimum start controls on thermostats to limit preheat times in certain zones so that particular areas reach the desired temperature in time for when the area is going to be occupied.
- **Balance heating distribution:** Ensure proper balance of heating distribution throughout your office by adjusting flow rates and balancing valves in the heating system. As a result, each room receives an adequate amount of heat, avoiding overcompensation and minimising energy waste.

Maintenance / upgrades

- **Boiler upgrade:** Consider switching to an electric heating system, such as electric boilers or heat pumps, which have high efficiency. Where this cannot be implemented ensure condensing modes on boilers are being optimised.
- **Regular boiler maintenance:** Conduct regular maintenance and servicing of heating systems to ensure they operate at peak efficiency. This includes cleaning or replacing air filters, checking and repairing ductwork, and optimising combustion efficiency.
- **Radiator or radiator valve upgrades:** Consider upgrading radiators or installing thermostatic radiator valves (TRVs) to provide individual control over heating in different rooms. TRVs allow occupants to adjust the temperature in each space, optimising comfort and energy use.
- **Energy-efficient space heaters:** Always opt to use centralised heat input, but if individual space heaters or secondary heating systems are required, opt for energy-efficient models with programmable settings.
- **Heat recovery systems:** Implement heat recovery systems, such as air-to-air or water-to-water heat exchangers, to capture and reuse waste heat generated by Heating, Ventilation and Air Conditioning (HVAC) systems or other processes. This recovered heat can be used to preheat incoming fresh air or hot water, reducing the energy required for heating.

[2] https://commonslibrary.parliament.uk/research-briefings/cbp-9714/
[3] https://energysavingtrust.org.uk/

Insulation

- **Utilise thermal window coverings:** Install thermal window coverings such as curtains or blinds to provide additional insulation and reduce heat loss through windows during colder months.
- **Pipework insulation:** Insulate exposed heating pipes, such as those in basements or utility areas, to prevent heat loss during distribution. Insulation minimises heat wastage, allowing more heat to reach the desired locations efficiently.
- **Radiator insulation:** Consider installing reflective radiator panels behind radiators to prevent heat loss through the external walls. These panels reflect heat back into the room, maximising the efficiency of radiators and reducing the amount of heat absorbed by the wall.

Check!

Is on site space heating in line with recommended temperatures for different areas and activities?

Space temperature guidelines (CIBSE)*

Room type		Production areas	
Office	21 - 23 ºC	Sedentary Work	19-21ºC
Corridors /Entrance Lobbie	19 - 21 ºC	Light work	19-21ºC
		Heavy Work	11 - 14ºC

* Chartered Institution of Building Services Engineers.

Building fabric upgrades

When it comes to energy savings, building fabric upgrades are a strong opportunity for improvement by focusing on key areas such as insulation, windows, roofing, and air sealing. Where you are not the owner of the office space, upgrades might require additional consideration and discussion with the owners to find appropriate solutions.

Prioritising these upgrades enhances the thermal performance of your building and minimises heat loss or gain. By starting with these improvements, you can optimise the efficiency of subsequent upgrades and maximise overall energy efficiency.

Building fabric

Upgrades

- **Identifying and sealing air leaks (infrared survey when lower ambient temperatures):** Identify and seal any air leaks in windows, doors, and building envelope to prevent drafts and heat loss. Consider completing an Infrared Survey to identify the most inefficient areas to prioritise.
- **Improve insulation:** Enhance insulation in walls, suspended ceilings, and floors to reduce heat loss and improve the overall thermal performance of the building. This includes insulating pipes, ducts, and valves to minimise heat loss during distribution.
- **Upgrade to energy-efficient windows:** Replace old, single-pane windows with energy-efficient double or triple-glazed windows that have low-emissivity coatings and insulating gas fills. This helps minimise heat transfer and improve overall energy performance.
- **Consider installing shading devices:** Install shading devices like external blinds, awnings, or overhangs to control solar heat gain. Implement these shading strategies to reduce reliance on air conditioning and enhance energy efficiency.

Water heating

Demand control

- **Water heater sizing and design:** Ensure proper sizing and design of water heating systems to match the actual hot water demand of the office. Oversized water heaters can result in energy waste, while undersized heaters may lead to insufficient hot water supply.

Maintenance / upgrades

- **Use water-efficient appliances:** Replace old, inefficient appliances such as dishwashers with water-efficient models. Look for appliances with high energy efficiency ratings and water-saving features to reduce hot water consumption.
- **Regular maintenance:** Conduct regular maintenance on water heaters, including checking for leaks, and ensuring proper operation. Well-maintained water heaters operate more efficiently and have a longer lifespan.

Insulation

- **Insulate the water heater tank:** Wrap the water heater tank with insulation (for example, insulating jackets) to reduce heat loss and improve its overall efficiency. This can help maintain water temperature and reduce the frequency of water heater cycles.
- **Pipework insulation:** Insulate hot water pipes to minimise heat loss during distribution. Pipe insulation helps maintain hot water temperatures and reduces the need to run taps or showers for extended periods to get hot water, thereby conserving water and energy.

Ventilation

Ventilation plays a critical role in maintaining a healthy and comfortable indoor environment for staff and visitors within offices as inadequate or inefficient ventilation can lead to poor indoor air quality and increased humidity levels. With a demand for ventilation in an office environment as a result, ventilation-related energy efficiency actions are key to ensure efficiency and optimisation of systems.

Maintenance/ upgrades

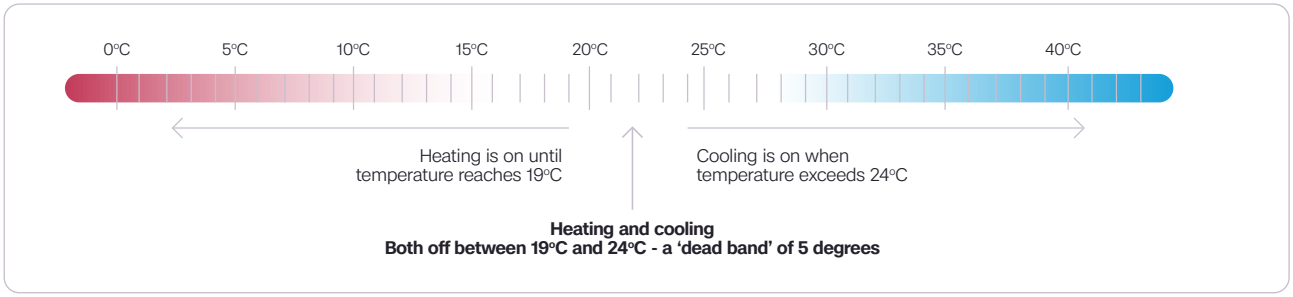
- **Regular maintenance and filter cleaning:** Perform regular maintenance on ventilation systems, including cleaning or replacing air filters, to ensure optimal performance. Clogged or dirty filters can impede airflow, strain the ventilation system, and lead to increased energy consumption.
- **Use energy-efficient ventilation fans and motors:** Upgrade or install energy-efficient mechanical ventilation systems that provide adequate fresh air while minimising energy consumption. Look for systems with variable speed drives (VSDs) and energy recovery capabilities.
- **Consider energy recovery systems:** Explore the possibility of implementing energy recovery systems that capture and transfer waste heat/ coolness from exhaust air to incoming fresh air. Such systems help reduce energy demand and improve energy efficiency by reducing the amount of energy required to precondition incoming air.
- **Install variable air volume (VAV) systems:** Consider installing VAV systems that modulate the air supply based on the varying needs of different zones within the workplace. VAV systems can adjust the airflow based on demand, resulting in energy savings by avoiding overventilation.

Heating ventilation and air conditioning (HVAC)

Multiple control-based actions can be implemented to optimise the performance of heating, ventilation, and air conditioning (HVAC) systems. By utilising control effectively, you can reduce energy consumption, lower utility costs, and create a more sustainable and comfortable indoor environment.

One of the most effective ways of reducing improving energy efficiency from air conditioning systems is to ensure that they are not working against the site's heating systems. Avoid letting heating and cooling operate at the same time by setting a temperature 'dead band' — a wide gap between the temperatures at which heating and cooling cut in.

For example, the heating might switch off when a temperature of 19ºC has been reached, but then cooling would not come on until the temperature exceeded 24ºC.



HVAC control

Control variables

- **Upgrading controls:** Utilising programmable thermostats to control temperature/ ventilation settings based on occupancy patterns and schedule, ensuring that heating and cooling is optimised for comfort while minimising energy waste during unoccupied periods.
- **Zoning:** Divide the office areas into different heating/cooling zones to allow for customised temperature control in different areas. This helps avoid over-heating or excessive cooling in unoccupied or less frequently used spaces (for example, hallways or staircases).
- **Use of timers:** Utilise HVAC time control/ programmers to turn heating/cooling on and off at a fixed times each day.
- **Weather compensation controls:** Utilise programmable HVAC systems that automatically alters the internal temperature and varies the heating/cooling according to the outside temperature, which can also include night setback controls.
- **Smart controls and monitoring:** Install smart controls and monitoring systems for HVAC systems to optimise operation and detect any anomalies or inefficiencies. These systems provide real-time data and insights to facilitate proactive management and energy optimisation.
- **Thermostat location:** Ensure accurate temperature readings are being taken by ensuring thermostats are not being influenced by draughts, sunlight or internal heat sources like radiators. This will increase accuracy and avoid unnecessary heating/cooling.

Lighting

Correct levels of lighting are an important health and safety requirement within office environments. However, the energy expenses associated with meeting this demand can sometimes be substantial. To address this, it is important to consider energy efficiency actions that not only meet the lighting requirements but also help save energy and reduce costs. The table below presents some key energy efficiency measures that can be implemented to achieve these goals while maintaining optimal lighting conditions within offices.

Optimisation

- **Optimise room design and layout:** Assess the lighting/room layout and ensure that fixtures are positioned optimally away from windows to allow natural light enhancement.
- **Optimise light levels for different areas:** Using a lux meter, assess the light levels and adjust as needed for different room types and functions. For example, luminescence of 200 lux is recommended for continuously occupied areas such as offices, while 100 lux is recommended for less frequented areas such as corridors. More information on lux levels can be found in the Invest NI Lighting Efficiency Guide.
- **Label light switches:** Ensure light switches are appropriately labelled and clearly indicate which lights they control to ensure energy is not being wasted in alternative zones.
- **Switch off policy:** Encourage staff to switch off lighting in areas of low occupancy (for examplestock rooms, bathrooms).

Maintenance/ upgrades

- **Upgrade to more efficient lighting (LEDs):** Replace traditional incandescent or fluorescent lights with energy-efficient LED lighting. LEDs consume significantly less energy and have a longer lifespan, resulting in reduced energy usage and maintenance costs.
- **Efficient lighting fixtures:** Choose energy-efficient lighting fixtures that are specifically designed to optimise light output while minimising energy consumption. Look for fixtures with high efficiency ratings.
- **Lighting Upgrades for exterior spaces:** Consider energy-efficient lighting options for outdoor areas such as parking lots and entry ways. Use solar powered lights or LED fixtures with motion sensors to minimise energy waste and enhance safety and security.
- **Dimmable Lighting:** Use dimmable lighting systems that allow for adjustable light levels based on the specific needs and preferences of staff and visitors. Dimming lights when full brightness is not required can lead to energy savings.
- **Alternative switching arrangements:** Consider different switching arrangements for switches that cater to multiple zones. This will ensure areas are not unintentionally lit when not required to minimise wasted energy.
- **Timers and scheduling:** Use timers or scheduling systems to automate lighting operations. Set specific time schedules for different areas, ensuring lights are turned on and off at appropriate times, avoiding unnecessary energy consumption.
- **Occupancy sensors:** Install lighting controls, such as occupancy sensors or motion detectors, to automatically turn off lights in unoccupied areas. These controls ensure that lights are only used when needed, minimising energy waste.
- **Daylight harvesting:** Take advantage of natural daylight by incorporating daylight harvesting techniques. Use light sensors to adjust artificial lighting levels based on available daylight, reducing the need for excessive artificial lighting during daytime hours.
- **Maintenance:** Implement a regular maintenance plan to clean lighting fixtures and replace any faulty or inefficient bulbs. Dusty or dirty fixtures can reduce light output and energy efficiency.

Building Management Systems (BMS)

A Building Management System (BMS) is an advanced control system which comprises both hardware and software - which is used to manage and monitor various building systems including heating, ventilation, and air conditioning (HVAC), lighting, security, fire, and other systems.

The BMS is typically comprised of a building automation controller (BAC) and a variety of sensors that collect data. The BAC uses this data to make decisions which aims to optimise the performance of these systems, reduce energy and maintenance costs – in addition to improving the comfort and safety of building occupants.

Case study

AIB Galway's Business Team operates from a 1,300sqm four-storey over basement office building - originally constructed some 50 years ago, on the corner of Eyre Square and Victoria Place in the centre of Galway City.

Following an extensive six month retrofitting project, the building will result in AIB's first large net zero building*. As part of the works external walls and rooftops were stripped back before being extensively insulated, the legacy oil boiler heating system was replaced with a more energy efficient heating and cooling system. The lighting system was upgraded to a LED installation, with improved controls, including motion sensors. An enhanced Building Management System was installed to ensure, all systems work as efficiently as possible and that any future deficiencies are identified at any early stage. The building now delivers a brighter, more modern working environment with energy efficiency at its core.

Overall, in its first full year of operation the property has saved 160,990 kWh of energy consumption - when compared to the pre-refurbishment period.

* Net Zero will be confirmed once operation of the corporate PPA solar farm commences and AIB can benefit from the Guarantees of Origin (GoOs) to demonstrate full traceability of renewable energy purchase.

Smart working and training

Through a combination of smart working practices and comprehensive training, office based businesses can effectively enhance energy efficiency. By equipping staff members with knowledge and awareness of energy-saving practices, they can make informed decisions and actively contribute to conserving energy. Training initiatives that emphasise the significance of energy efficiency and provide guidelines on behaviours like lighting usage (for example, through the implementation of a switch-off policy), Heating Ventilation and Air Conditioning (HVAC) optimisation and the utilisation of energy-efficient equipment foster a collaborative environment where employees are empowered to make energy-conscious choices. This collective effort creates a culture of energy consciousness within the office environment, benefiting both the facility and the staff by promoting sustainability and reducing energy consumption.

Staff kitchens

Implementing effective energy management practices within kitchen spaces can yield cost savings while simultaneously enhancing staff working conditions.

Regardless the size of your office kitchen, there are a range of ways in which energy efficiencies can be enhanced.

Kitchen activities - Maintenance/ upgrades

Energy-efficient appliances

Replace outdated kitchen appliances with energy-efficient models that have high Energy Efficiency ratings such as induction cooktops or newer models of fridges designed to consume less energy while maintaining optimal performance.

Ventilation system optimisation

Optimise the kitchen ventilation system to efficiently remove excess heat, steam, and odours. Use properly sized and maintained exhaust hoods, fans, and filters to ensure effective ventilation while minimising energy waste.

Maintenance

Check when appliances were last serviced and assess whether older items are still running efficiently. Running old, inefficient appliances could be using additional energy resulting in higher operational costs compared to investing in newer, more efficient models.

Renewable generation technologies

Renewable generation systems can be utilised in many ways to reduce or even eliminate a building's demand for fossil fuel energy systems. The choice of renewable generation system for your office depends on factors such as available resources, site conditions, energy requirements, and financial feasibility. It is advisable to conduct a feasibility study and consult with renewable energy professionals to determine the most suitable and cost-effective renewable generation system for a building. The below systems however offer some great initial considerations.

Renewable generation

Heat pump water heaters

Consider installing heat pump water heaters, which extract heat from the surrounding air and use it to heat water. Heat pump water heaters are highly energy-efficient and can provide significant savings compared to traditional electric water heaters.

Solar photovoltaic (PV) systems

Install solar PV systems on your building's roof or in nearby open spaces to generate energy. The generated solar power can be used to offset the energy consumed by lighting systems, making the lighting more sustainable and reducing reliance on fossil fuel-based energy sources.

Solar water heating

Install solar water heating systems that use solar collectors to heat water using renewable energy. This can supplement traditional water heating methods and reduce reliance on fossil fuel-based heating sources.

Solar diverters

Consider utilising a solar diverter to redirect surplus electricity generated by solar/ PV panels to alternative loads or energy storage systems (for example, water tank), rather than exporting it back to the grid. This allows generation to be used in alternative ways that can reduce the energy demand of other systems (for example, heating water).

Solar-powered Lighting

Install solar-powered lighting fixtures for outdoor areas such as pathways, gardens, and parking lots. These fixtures have built-in solar panels that convert sunlight into electricity, eliminating the need for grid power and reducing energy consumption.

Case study

Activ8 Energies is the pioneering solar energy company in Ireland, leading the nation's transition to sustainable energy since 2007. With over 110,000 solar panels installed across Ireland, they are renowned as Ireland's solar experts. From their purpose-built NZEB headquarters in Carrickmacross, Co. Monaghan, their mission is to empower homeowners and businesses to generate renewable electricity and reduce their carbon footprint.

For one of their more recent office projects, Activ8 installed 345 QCELLS panels for Meath County Council in Navan which will see the equivalent of 30,625Kg of CO_2 emissions avoided each year as well as an estimated saving of €18,750 on electrical costs through the production of 125,000kWh from the solar PV system. This is the carbon equivalent of planting 1,426 trees.

Material use and waste reduction

As with energy, using your organisation's purchased materials more efficiently should have a direct effect on the waste that's generated. Preventing waste has been estimated to save up to 10 times the actual disposal cost, due to the hidden costs of waste such as lost labour time, energy costs and lost materials. Typical materials and waste include packaging, cleaning products, office stationery and paper and other kitchen and office materials waste.

A Green Procurement Policy can be a useful guide for your business, placing increased weight on sustainability when making purchasing decisions of goods and services such as office supplies. It can be another useful tool to support higher material efficiency as well as foster change and higher efficiency from stakeholders across your supply chain to become more sustainability themselves.

Hot spot areas for material efficiency and waste reduction

Packaging

Reduce single use packaging

Ask suppliers if they can deliver materials in reusable or returnable packaging, such as returnable plastic crates instead of cardboard boxes. Not only should this improve your resource efficiency, but also reduce waste disposal costs.

Request recycled packaging

Packaging made from recycled content means that it was not made from fully virgin materials, giving it a lower carbon footprint than the virgin equivalent.

Reduce packaging

Where possible, ask if suppliers will deliver without packaging. Some independent local suppliers often foster strong relationships with clients and greater flexibility around delivery options.

Consumables (cleaning products, office stationery, toiletries.)

Concentrated products

Purchase concentrated cleaning fluids that can be decanted and diluted into smaller spray bottles. Not only will this reduce packaging, but it should reduce waste disposal costs.

Bulk purchase

Reduce the quantity of smaller containers by purchasing in bulk. This is particularly good for items that can be decanted into smaller containers for day-to-day use. For example, refill hand soap dispensers in bathrooms instead of buying new disposable ones.

Kitchen and other office waste

Segregate waste

Provide separate food waste bins in the kitchen/ shared areas and other areas of the building, which are clearly labelled and signed to enable staff and visitors to use them as efficiently as possible. This is also applicable to all streams of waste including general waste, and mixed recyclables.

Reduce number of bins across office

Examine how many bins are used around the office and implement actions to reduce the amount of waste produced in the first place.

Green procurement policy

Buy locally

Use a local supplier for your materials to reduce transport costs and environmental impacts from deliveries.

Supplier surveys

Send out a survey to your suppliers, to engage regarding their sustainability and environmental policies and carbon emissions. When deciding on a new supplier, the survey can be useful to inform your choice of supplier.

Avoid single-use products

Unless it is necessary for hygiene reasons, provide re-usable office supplies to your employees, for example, water glasses instead of paper or plastic cups or metal cutlery instead of single-use versions.

Raise awareness

Communicate your Green Procurement Policy to your staff to ensure they're aware and empowered to make more sustainable procurement decisions.

Water

Water conservation is a key consideration for sustainable business practices. Water can be an expensive resource if not managed correctly so it requires careful consideration. One of the most effective ways of reducing water use is surveying all areas in your workplace that require water. Doing so will help you identify how much is being used and where savings can be made. This information can usually be found on water bills if your site has a water meter. A water conversation programme would also be beneficial to conserve water usage, monitor and benchmark water usage on a regular basis, and detect leaks early.

Benchmarking is an effective tool that can track water usage over time. You can base your calculations on either the number of staff in your business or the size of your office space. The formulas to create your benchmark water figure, based on the standard of 253 business days, are as follows:

$$\frac{\text{Volume of water used(M3)}}{\text{No of staff x 253}} \times 1000 = \text{Benchmark (Litres/day)}$$

OR

$$\frac{\text{Volume of water used(M3)}}{\text{office floor area x 253}} \times 1000 = \text{Benchmark (Litres/day)}$$

WaterWise, an independent research body, published guidelines for offices[4] which are summarised here to include figures for best practice, typical, and excessive water use in offices.

		Litres per day (assuming 253 days per business year)
Best practice use	By employee	7.9 litres/employee/day
	By area	1.6 litres/m2/day
Typical use	By employee	15.8 litres/employee/day
	By area	2.4 litres/m2/da
Excessive use	By employee	27.7 litres/employee/day
	By area	3.2 litres/m2/day

[4] https://www.waterwise.org.uk

Hot spots for water conservation

Kitchen

- **Dishwasher unit efficiency:** Is your dishwasher using more water than it needs to? Compare how many litres it consumes per cycle with other similar capacity units on the market. Consider running it on an eco-cycle whenever possible.
- **Optimise usage:** Ensure your dishwashers are filled to max capacity before running the cycle, as this will optimise cycle times. Instilling sustainable habits in staff should result in real long-term time and money savings.
- **Pessure valves:** Consider installing pressure reducing valves on taps. Regulating water flow is a simple way to reduce water use, and the energy needed to heat it.
- **Handwashing:** For handwashing taps, a flow rate of 4 – 6 litres per minute is recommended. This can reduce water consumption while maintaining a sufficient flow for hygiene.
- **Boiling water tap:** Consider whether installing a boiling water tap would increase water and heating efficiency.

Bathroom toilets, showers, taps

- **Install water saving taps and shower heads:** If bathroom taps have higher flowrates, fit laminar flow aerators to reduce flowrates to 2 – 4 litres per minute. Begin with kitchen taps, these could be reduced to 6-8 litres per minute.
- **Install low flush toilets:** Older style toilets can use up to 13 litres of water per flush. Many efficient toilets only use up to 4.5 litres per flush, leading to potential water savings of over 50% per flush.
- **Consider retrofitting toilets with low flush devices:** If budgets are a challenge, there are a number of water saving devices available which minimise water use in existing toilets by restricting the volume of water used per flush. These include retrofit dual flush conversion kits, cistern dams and cistern bags.

General good practice

- **Leaks:** Identify and report any leaky taps and pipes.
- **Turn off policy:** Implement a 'turn off' policy, encouraging staff not to leave taps running.
- **Staff engagement:** Introduce staff training and awareness to highlight the importance and benefits of water efficiency to the business. This should be done semi-regularly as some long-term staff may require refresher sessions.

IT Considerations

Office equipment has grown to become a significant part of the energy consumption of office-based businesses. The electricity it consumes represents approximately 15% of total energy consumption in office environments[5]. Due to its high upfront cost and embedded carbon, optimising your IT use will ensure longevity and reduced energy costs.

Hot spot areas for more sustainable IT

Hardware

- **Instate cloud computing:** Switching to cloud-based computing instead of using physical servers on your premises significantly reduces the energy usage of your business and thus the cost and carbon emissions of your business. While cloud-based systems are still deploying physical servers somewhere, they will be used to optimum capacity.
- **Minimise printing:** Try and go paperless wherever possible, storing digital versions of documents instead. Where this is not possible, ensure to print in black and white and double-sided to reduce paper used.
- **Minimise cooling required for IT:** Place heat emitting equipment such as printers and photocopiers in a separate, naturally ventilated area with good airflow. This helps minimise air conditioning costs and excessive noise. Review recommended set-points for server rooms as these can typically be over-cooled leading to unnecessary costs and emissions.
- **Consider upgrading existing PCs/laptops:** Some computers can simply be upgraded with newer, more energy efficient components. You should check this option before purchasing new machines to reduce costs and the embedded carbon in new devices.

Software

- **Sustainable website practices:** Websites can emit a lot of carbon, which is not always obvious. Enquire with your website designers and developers if they are utilising sustainable coding practices as well as optimised speed and content[6]. This will ultimately support customers finding their way across your website better as well, increasing likelihood of them following your calls to action.
- **Effective use of specialist software:** Sometimes, specialist software is critical to office based businesses. When considering the purchase of new software, enquire with the supplier how much storage space is needed and if it can be stored in a cloud-based environment. Wherever possible, choose software that can be used in a cloud-based environment to optimise disk space used on your PC/laptop. This might also reduce costs.
- **Cancel unnecessary newsletter subscriptions:** Not only will you remove clutter from your inbox, but storing unnecessary emails leads to increased storage on servers and thus a potential increase in cost and carbon. If automatic newsletters aren't of use to you anymore, make sure to unsubscribe.

[5] https://www.carbontrust.com/
[6] https://sustainablewebdesign.org/calculating-digital-emissions/

IT end-of-life

IT reuse

Assess whether there might be any use left in IT equipment you are replacing before disposal. Donation opportunities or re-use schemes might be available in your area where your used equipment can find a second life.

IT recycling

Office equipment that has reached its end of life needs to be disposed of appropriately following Waste of Electrical and Electronic Equipment (WEEE) regulation to allow valuable resources to be recovered for further use.

General best practice

Turn off / power down

IT equipment should be switched off when not in use, for example overnight. This reduces energy consumption of IT, as well as heat produced. Enable the standby mode in infrequently used equipment, such as printers and photocopiers.

Raise staff awareness and commitment

Staff should be included in the development and roll-out of policies, so you should provide appropriate training and communication on policies related to IT and listen to staff ideas.

Reduce unnecessary emails

Where appropriate (for example, for conversations with colleagues in the same office) unactionable emails such as “thank you” emails can be avoided to reduce carbon and saves time.

Case study

Ergo is one of Ireland’s largest IT solutions providers and has pioneered the sector for over 30 years.

With a growing global footprint, the business has a depth of expertise across managed services, cloud, application development, modern work solutions and IT resourcing - and maintains a significant focus on sustainability both internally and externally for its clients.

Ergo are joined to a network of 50,000 suppliers established by EcoVadis, an organisation that assesses and measures the environmental impact of a company’s supply chain. By selectively sourcing products and packaging from third parties to minimise Scope 3 emissions and by adjusting the supply chain up and downstream, Ergo mitigates the impact of partners who are less advanced in decarbonisation.

ergo:·

To bolster this, and in alignment with Ergo’s strategy to use external frameworks, the company has been certified to the ISO 14001 Environmental Management standard. Driving this is Ergo’s policy to ensure it is reducing its carbon footprint by procuring renewable electricity and implementing energy-efficient IT solutions for its clients.

Furthermore, Ergo works with clients on cloud-first strategies that deliver a range of benefits, such as

- Public clouds can reduce a company’s carbon emissions by economies of scale.
- Virtualisation and converged IT stacks make private clouds more energy efficient.
- Cloud enables hybrid working which cuts back on travel and reduces carbon footprints.

Ergo believes this journey is worthwhile from a carbon footprint reduction perspective for clients and is also living this journey itself.

Transport and travel

Adopting a more sustainable approach to transport within your business can have many benefits, not only in relation to environmental impact, but also in terms of efficiencies across the entire business operation, lowering costs, boosting competitiveness and market opportunities, and improving safety, health and wellbeing within in the workforce and local community. What approach you take depends largely on business need and it is recommended that a business undertakes the appropriate review of its environmental priorities, operational requirements and life-cycle costs assessments, to identify vehicles that meet those needs. Since travel is often unavoidable for many businesses, it is crucial to optimise fleet management.

Some key sustainable improvement opportunities for fleet management and transport are highlighted in this report.

Hot spot areas for transport and travel

Transport efficiency

Fleet management

Vehicle efficiency

Aim to be as efficient as possible with current vehicle offerings, including looking for vehicles with excellent fuel economy, appropriate vehicle size for your fleet to be the smallest for your travel needs, use of stop start technology, or speed limiters to improve fuel efficiency.

Maintenance management

A proactive, preventative maintenance schedule is an effective way of ensuring the optimal efficiency output of your vehicles. Aim to address potential problems before they become an issue and ensure your vehicles are running as sustainably as possible.

Fuel management

Monitoring operational fuel usage is a fundamental step in establishing the baseline data which will enable corrective actions to be implemented. Businesses with a work fleet can use staff expenses and mileage claims to track the fuel usage over time and optimise usage while considering external factors such as weather.

Electrify your business fleet

Benefits of upgrading to electric vehicles for your business include a reduced carbon footprint, lower maintenance costs, removing the exposure to fuel price volatility, enhancing your reputation as a sustainable business, and mitigating against the impact of future diesel and petrol bans.

Transport efficiency (Continued)

Driver training

Smoother driving

Using better awareness and appropriate distances from other vehicles in anticipation of situations ahead which might lead to sudden braking, then re-acceleration. Pre-emptively reducing speed without braking will lower fuel use over the course of a journey.

Early gear changing

The higher the gear (relative to the desired speed), the lower the Revolutions Per Minute (RPM), the better the fuel economy. Moving to a higher gear earlier, skipping gears if appropriate, helps reduce unnecessary fuel consumption.

Accelerating only when necessary

The accelerator is not a constant requirement. Going downhill and slowing down present opportunities to activate the fuel cut-off switch by removing the foot from the accelerator at the earliest opportunity and remaining in gear as the vehicle travels. This reduces fuel flow almost entirely.

Slowing down

Excessive speed will also significantly impact on fuel consumption, so driving slower is a good practice for drivers.

Client meetings

Public transport

Assess the opportunity to use public transport links to reach client sites, such as buses and trains. Tickets are often cheaper than the petrol for a company fleet while the carbon emissions are lowered significantly by making this change. Note that flying might be the only exception, being more polluting than driving, and should be assessed separately.

Virtual meetings

Virtualise your client meetings through video calls where appropriate to reduce time, cost, and environmental impact of travel. Screenshare, whiteboards, and more are useful functionalities of most communication platforms.

Commute

Cycle to work scheme

Encouraging active travel in your workforce has a multitude of benefits including health, sustainability, and financials. The Cycle to Work Scheme allows tax savings through a salary sacrifice scheme, saving costs.

Hybrid work

Reducing the number of days an employee is required to come to the office through a hybrid working policy has a positive impact on the carbon emissions by reducing the commute. It also saves time and can be a health benefit for some employees.

Encourage carpooling

There is a chance that some of your employees share the same commute or part of it. Encouraging carpooling throughout your workforce can reduce the environmental impact of staff commutes, optimising the use of the vehicles.

Social sustainability

Social sustainability assesses a company's engagement with, and impact on, its workers, suppliers, and the local community. Organisations can positively contribute to fairness in society, investing in fair and equal opportunities and conditions for employees, people working in the supply chain, and local communities.

The benefits of improving social sustainability

- Improving business reputation.
- Attracting employees who value working for a socially and environmentally conscious employer.
- Attracting clients who may be more willing to support socially and environmentally progressive business compared to those who are less so.

There are many ways in which social sustainability can be promoted in your business, depending on the different stakeholder groups you interact with.

We've outlined some of the top things to consider when engaging with these three key stakeholder groups.

Hot spots for social sustainability

Workforce

Staff development

Providing regular training, support, and career progression opportunities to staff to improve their confidence and sense of value in the team. Staff who feel valued and included within the team are more likely to perform well and foster company loyalty. This can reduce costs associated with staff turnover and low productivity.

Communication

Ensure the sustainability plan is communicated to all staff and they are encouraged to actively participate through regular updates and meetings. Ask staff for their inputs and suggestions they may have on how the facility can become more sustainable.

Health and safety

Supporting health, safety, and wellbeing, making your business a safe, welcoming, and desirable place to work.

Equality

Promoting equality in the workforce with diversity and inclusivity policies.

Suppliers

Health and safety

Supporting health, safety, and wellbeing, making your business a safe, welcoming, and desirable place to work.

Equality

Promoting equality in the workforce with diversity and inclusivity policies.

Clients and community

Equality

Preventing social injustices and promoting equality and inclusion within all your stakeholders.

Community engagement

Contributing to the local community, such as investing in local projects or funding educational initiatives.

Additional resources

- **The Carbon Trust** provides advice and support to businesses looking to improve their environmental performance.
  www.carbontrust.com

- **Netregs** is a partnership between the Northern Ireland Environment Agency (NIEA) in Northern Ireland and the Scottish Environment Protection Agency (SEPA) in Scotland, providing free environmental guidance for businesses throughout Northern Ireland and Scotland.
  www.netregs.org.uk

- **Invest NI** is a regional development agency which provides support and funding to help businesses operate more efficiently, minimise waste, reduce costs and reduce environmental impact.
  www.investni.com

- **Energy Savings Trust** support businesses with energy efficiency strategies, research, assurance and communications.
  www.energysavingtrust.org.uk

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