

THE GREEN OFFICE



SUPPORTING PARTNER:



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WHAT IS A GREEN OFFICE?

The purpose of a green office programme is to enable a business to improve the efficiency of its everyday operations by taking practical steps to reduce office resource consumption and implement more sustainable practices that benefit both the organisation and its employees.

A green office programme should look to cover the resource impacts of an office environment such as energy use, water consumption, waste, air quality, noise pollution and transport, but also the assets within an office such as fixtures and fittings, heating and cooling systems, IT equipment, furniture, stationery supplies and staff.

The other role that a green office can play is internal engagement with staff around sustainability issues to aid the transition to a more sustainable society. ▶

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WHICH ORGANISATIONS ARE SUITED TO DEVELOPING A GREEN OFFICE?

All organisations, regardless of sector or size, will benefit to some extent if they have an office or administrative centre. A micro-business can achieve immediate savings from undertaking simple actions such as switching lights off or computer monitors to standby when not in use. A SME may be able to allocate resources to a dedicated plan of action, with phased improvements and targeted timelines. Larger corporations with more advanced programmes could consider investing in innovative solutions such as electrochromic windows that reduce heat loss, or carpets that improve air quality.

Organisations which don't own, but rather rent, office space should look at what factors they can have direct influence over. Procurement is an obvious starting point – consider sourcing paper from sustainable sources (FSC or PEFC), energy-efficient assets or remanufactured furniture. There may also be opportunities to work with the landlord or property management company to make broader changes that would benefit the whole building, such as switching to greener energy tariffs or replacing communal waste bins with source-segregated recycling stations.

WHAT ARE THE BENEFITS OF CREATING A GREEN OFFICE?

It can drive significant operational cost savings, particularly for energy-intensive organisations. Office equipment alone is the fastest growing energy user in the business world, consuming 15% of the total electricity used in offices – a figure which is expected to rise by 2020.

It is also a key driver for resource efficiency, as it requires organisations to measure and monitor their resource use, benchmark performance, and aspire to continuous improvement. Over time, the data gathered can be used as the basis for sustainability reporting, particularly useful for SMEs looking to publicly demonstrate improved

environmental performance. For larger businesses, such data can feed into energy audits, helping them comply with key regulations like the Energy Savings Opportunity Scheme (ESOS).

Driving staff engagement and behaviour change is another benefit. The average office worker uses up to 45 sheets of paper a day, much of which ends up as waste. A green office programme can not only educate employees to adopt more environmentally-friendly habits, but inspire them to become 'green champions' to deliver meaningful change from the ground up.

Increasingly, having a green office is seen as a reputation builder. It promotes positive change within an organisation and externally with stakeholders, and can give companies a competitive edge when pitching for tenders. Indirect benefits include: rise in employee health and wellbeing; increase in staff productivity; improved recruitment / retention; better public / media image; effective stakeholder engagement.

HOW CAN I GREEN MY OFFICE?

The easiest and most cost-effective time to implement or scale up a green office programme is during times of refurbishment, or when equipment or furniture is being upgraded. There are many factors to consider – some useful pointers are detailed below:

Getting started

The first step is to understand and quantify how the office uses resources such as energy, water, consumables (e.g. paper, food) and materials (e.g. packaging). Identifying key waste streams is also important. Consider undertaking an office energy or waste audit to help with these assessments. External organisations such as The Carbon Neutral Company and the Waste & Resources Action Programme (WRAP) can give support and guidance in this respect.

The second step is to decide what impacts to measure and monitor, and start gathering this data on a regular basis. This data will help with tracking and benchmarking performance over time. ▶

TOP TIP:

SWITCH OFF! IT SAVES MONEY

The Carbon Trust estimates that a single computer and monitor left on 24 hours a day will cost £45 a year. This could be reduced to less than £10 a year by switching it off out of hours and enabling standby features.



It is advisable to adopt a phased approach when starting out on a green office programme – trying to tackle everything at once will seem daunting.”



Impacts will vary according to business type, but it is generally recommended that offices regularly monitor and measure energy consumption, solid waste arisings and key consumables like paper, office supplies and disposable items (e.g. plastic cups, hand towels).

It is advisable to adopt a phased approach when starting out on a green office programme – trying to tackle everything at once will seem daunting. The biggest impacts (hotspots) should be targeted first, underpinned with short timelines for action/review, as this can help with measuring progress quickly.

Boardroom buy-in

Making the business case will help secure any investment needed in implementing a programme, as well as drive board-level engagement which is critical. An obvious starting point is to highlight potential energy savings. There are many low and no-cost solutions an organisation can use to reduce energy consumption – due to wasteful practices, the average UK organisation wastes up to 20% of the energy it is billed for.

Funding is also available. SMEs in England, Scotland and Wales with an energy spend more than £50,000 per year can benefit from the Carbon Trust Green Business Fund, which offers free energy assessments and grants up to £5,000 towards energy-saving equipment purchases. There are also tax incentives such as Enhanced Capital Allowances.

There is a strong case to be made for waste prevention. Typically, more than 70% of office waste is recyclable, but on average less than 10% gets recycled. According to WRAP, total waste costs for an organisation can be as high as 4% of annual turnover. Taking simple waste reduction measures can save between £400 - £1,000 for every employee and reduce total waste costs down to 1% of turnover.

Benchmarking performance

Undertake a baseline assessment so progress can be tracked and compared against previous years. Obtaining data for these assessments can be relatively straightforward. Good sources of data include meter readings, energy bills, waste transfer notes, and purchase invoices for office equipment.

Apply the relevant unit of measurement against each (e.g. KWh for energy consumption, tonnes for waste arisings) and the frequency of measurement (daily, weekly or monthly).

Consider setting Key Performance Indicators (KPIs) – these can be useful to present data in meaningful ways and highlight areas for action. For example, a KPI could be total office energy consumption per month, water use per employee per month, or number of paper pages used per employee per month. Data should be recorded in a comparable format so that performance can be assessed over time, and eventually against other businesses. Government guidance can be accessed on key environmental KPIs, and reporting guidelines.

Hotspots to focus on

There are four key areas where offices can significantly reduce their impacts: energy saving, waste prevention, sourcing sustainable paper, and green procurement.

- **Energy saving**

Energy is one of the largest controllable overheads in an office and can be addressed through a three-pronged approach – switching off equipment when not in use, replacing old equipment with more energy-efficient models, and incorporating energy efficiency measures into routine building maintenance. The following areas should be targeted to see where costs can be reduced: lighting, heating and cooling, office equipment and building fabric.

Lighting – replace tungsten light bulbs with light emitting diode (LED) bulbs or compact fluorescent lamps (CFLs), these can last up to ten times longer, resulting in a 75% energy saving. Daylight or occupancy sensors can be installed to ensure that lights are only switched on when required, particularly useful in meeting rooms, store rooms or toilets. Any manually-operated light switch should be labelled with a ‘Switch Off’ sticker to encourage good housekeeping. Use of natural light in an office should be prioritised. Consider daylight blinds that allow better natural light distribution whilst protecting staff from excess heat or glare. ▶

TOP TIP:

THINK BEYOND THE BALANCE SHEET

Present a green office programme not as a standalone cost-saving initiative, but as part of a broader integrated approach. Demonstrate how it can add value to other initiatives within the business, such as operational resource efficiency, carbon reduction, corporate reporting, promotion of staff wellbeing, and supply chain engagement.



Internal buy-in and support for a green office programme is essential and will help drive long-term behaviour change.”



Heating and cooling – turn down the heating temperature of a room by 1°C, this can reduce heating bills by 8-10%. As a general rule, set air-conditioning to come on only when temperatures exceed 24°C. Timers and temperature control sensors can warm up an office before staff arrive, automatically switching off heating once an optimum temperature has been reached. Other simple measures include keeping radiators and air vents free of obstruction, insulating boilers, hot water tanks and pipes and installing double or triple glazed windows. For larger offices, consider investing in a Building Energy Management System (BEMS) – these can typically reduce energy costs by 10%.

Office equipment – as a rule of thumb, PCs and monitors represent the lion's share of energy consumption here. Photocopiers and printers are also significant energy users. Enable automatic power saving modes on equipment and devices, and encourage staff to switch off their devices when not in use – plug-in timers fitted to communal equipment such as printers and vending machines can help with this. Consider placing any large heat-emitting devices like photocopiers in cooler spaces with good air flow to cut down on air conditioning costs.

Building fabric – up to two-thirds of office heat is typically lost through roofs, windows, ventilation, floors and walls. Effective building controls – which can form part of a wider BEMS – that govern factors like heating / cooling, ventilation, lighting and windows can help prevent this heat loss. Other measures that will improve the general building fabric include roof and cavity wall insulation, draught-proofing and solar shading systems like light shelves and external blinds. It should be noted that most of these measures may require significant investment.

• **Waste prevention**

Follow the principles of the waste hierarchy, look first to reduce or prevent waste before finding ways to reuse or recycle it. Replace individual desk bins with communal source-segregated recycling bins or stations – WRAP recommends using one recycling bin for every six staff. Encourage reuse of office assets and supplies such as marketing materials, stationery supplies, cutlery, and packaging like cardboard boxes.

Install hand dryers in toilets to eliminate the use of paper towels, and replace bottled water with water coolers. Before recycling kitchen or canteen waste, explore opportunities to compost it on-site, subject to licensing requirements. There may also be opportunities to work with neighbouring businesses to negotiate better rates for waste collection by bulking up recyclates for economies of scale. Waste reduction is strongly linked to purchasing, and this is where some of the biggest gains can be made (see 'Procurement' on P6).

• **Sourcing sustainable paper**

It is advisable to take a lifecycle approach to paper use due to the significant environmental impacts associated with virgin paper. Look to buy paper from sustainably-managed forest sources. If virgin paper is necessary, buy from certified sources like the Forest Stewardship Council (FSC) that can demonstrate a full chain of custody. Forests play a crucial role providing ecosystem services and climate change mitigation. Without the demand for paper from sustainably managed forests these sources could no longer be considered commercially viable and therefore the forests could be cut down for more profitable use such as agriculture.

Using thinner paper (80gsm weight is fine for most printing purposes) cuts down on raw material usage. Also consider the toxic impacts of pulp and paper production and use Total Chlorine Free paper (TCF) if possible.

Apply the waste hierarchy to paper use – encourage electronic communication and print only when necessary, enable double-sided printing which can reduce paper use by 50%, and reuse any scrap paper (e.g. for taking notes). Desk printers can be very convenient for staff and may encourage more printing so consider reducing the number of them, or moving them to a central location. As paper can be recycled up to five or six times, ensure used paper doesn't end up in a general waste bin. ▶

TOP TIP:

MAXIMISE YOUR COMFORT ZONE

The recommended room temperature for office work is 21-23°C, however most office heating is not set above 19°C due to the extra heat levels emitted from equipment, lighting and occupants.



The easiest and most cost-effective time to implement or scale up a green office programme is during times of refurbishment, or when equipment or furniture is being upgraded.”



- **Procurement**

Always consider the lifecycle impacts and costs of any asset or office supply purchased (see 'Sourcing sustainable paper' as an example). Procurement guidelines should specify energy-efficient products with recycled content where possible, that come with minimal or reusable packaging. Also, look to buy products that are easily recyclable. There are now dedicated suppliers for remanufactured or refurbished equipment like office chairs and desks, and online platforms such as Warp It that help organisations reduce unnecessary purchasing through the redistribution, reuse and loan of surplus office furniture.

Staff engagement

Internal buy-in and support for a green office programme is essential and will help drive long-term behaviour change. Don't be too prescriptive, employees are often well-placed to identify how working practices can be improved, so involve them from the start and ask for their input. Establish a small team of 'green champions' or sustainability co-ordinators from across different departments in the organisation who are willing to take ownership of the programme and help facilitate ground-level action. As the programme gets traction, the team can be expanded and given more responsibility.

Demonstrate positive impacts. Hold awareness days and show staff how simple changes like recycling more paper can cut down the number of black bin bags each team or department produces per week. Consider offering incentives for good ideas that are implemented and provide feedback on monthly efforts. Where possible demonstrate business cost savings, but more importantly indirect benefits that are important to the individual, such as improved health and well-being from taking the stairs instead of the lift, or from the use of more natural light at workstations.

Technology and innovation

Technology can play a key role for organisations who already have quite advanced green office programmes. Investing in innovative solutions like air pollution absorbing carpets and paints and Wi-Fi enabled polarised windows can promote a healthier workplace.

Installing reverse vending machines that accept used cups and empty drinks containers provide ready-made recycling solutions for key waste streams. For office paper, all-in-one recycling printers are under development that can recycle waste paper into new paper using a near waterless process.

HOW BEST TO MEASURE THE IMPACTS OF A GREEN OFFICE?

Robust data gathering and monitoring is crucial. For small offices, this can be as simple as taking regular meter readings, weighing the amount of waste produced over set periods or tracking purchasing information from invoices. For larger offices, consider investing in a recognised environmental management system or framework such as ISO14001 which provides clear guidance on how to monitor, measure and continuously improve key operations that have a significant environmental impact.

Benchmarking office performance is covered in an earlier section in this guide, but it is a good idea to also compare progress against peers. WRAP offers some useful data as a starting point. For example, a good practice office produces fewer than 200kg of waste per staff member per year and achieves recycling rates between 60%-70%. WRAP also provides examples of good practice energy use and emissions depending on the type and size of office.

There are free online carbon benchmarking tools available such as Compare Your Footprint, which compares a company's performance against others in its industry. Meanwhile, pledge-based websites like the Do Nation can help organisations set up targeted green office campaigns to encourage engagement and behaviour change whilst monitoring their impact. ■

TOP TIP:

BOOST CREDIBILITY WITH CERTIFICATION

Working to a recognised environmental or sustainability standard not only gives a green office programme credibility but an entire company as well. ISO14001 certification has many benefits – it is regulation-compliant, includes the need for continuous improvement and encourages better environmental performance from suppliers. However, it can be costly to go through, and it might not offer such obvious business benefits for smaller organisations. Alternatives to consider, which can deliver considerable benefits, include The Planet Mark certification programme and The Carbon Trust standards for carbon, water and waste.

CASE STUDY: COMMERCIAL GROUP IS MAKING OFFICES GREENER



In the words of environmentalist Jonathan Porritt, business services specialist Commercial Group “demonstrates that profitability and business growth can be achieved through environmentally sound practices and procedures”.

Commercial’s offering spans office supplies, interiors, technologies and print. It helps organisations make more intelligent decisions that combine environmental responsibility and cost-efficiency benefits. This is evident across a broad spectrum of office items and services, ranging from green categorisation of everyday office products to business process automation; office space utilisation services to FollowMe printing.

But it’s the way sustainability infiltrates Commercial’s own operations that really sets it apart. At the heart of its sustainability strategy, Commercial uses ISO 14001 as a framework to recognise, measure and continually reduce negative environmental impacts. And as a leader in responsible business practice, it makes waves up and down the supply chain, helping customers, suppliers and the wider business community operate more sustainably.

Reduced-emission deliveries

One area the business continues to focus on is reducing emissions associated with its fleet of delivery vans. Today, Commercial owns and operates the UK’s largest privately-owned hydrogen-fuelled delivery fleet, as well as electric vans for patches with suitable

operating parameters. It actively collaborates with organisations such as LoCity and Hydrogen London to help prove the concept of breakthrough technologies for hydrogen-fuelled 3.5 tonne vans. Reducing delivery emissions benefits customers that want to manage the overall carbon footprint of their office goods supply chain. And for clients operating their own delivery fleets, value added consultancy can be provided on the roll out of low-emission vehicles.

Waste management

Commercial applies the waste hierarchy to its entire operation and has been a zero-waste-to-landfill company since 2013 whilst maintaining recycling rates at more than 90%. With top management commitment, this ambition was realised by working closely with waste and recycling contractors to ensure non-recyclable

waste is sent to an energy-waste facility as opposed to landfill.

Commercial’s London operation also adds value to customers by providing a comprehensive recycling service for items including plastic, cans and glass as well as office consumables. Recycling is collected as a backload when vehicles are already on patch, eliminating the need for a separate collection. The model has been recognised as means to reduce traffic and congestion, two major factors impacting air quality in towns and cities. It led to the company being named Corporate Recycler of the Year at the National Recycling Awards 2017.

Employee engagement

Deliberate steps have been taken to ensure sustainability at Commercial is self-fulfilling and progressive. Its Green

Angels employee engagement programme enables staff to play an active role in ongoing business transformation. The programme gives employees a sense of purpose and involvement in sustainability related decisions across the business. It has driven major achievements and developments within the business, from zero-waste-to-landfill status to a living wall.

Beyond green

A green office programme is an excellent way to improve efficiency and manage consumption of resources. But considering environmental factors in isolation can only achieve so much.

Commercial is now tackling the broader interplay of environmental, social and economic aspects of sustainability. In 2014, it established a social enterprise, Commercial Foundations, to provide disadvantaged young people with opportunities and skills to get into work. In 2017, it launched a Products with Purpose range of office supplies – the profits of which will be directly channelled to Commercial Foundations. And in 2018 Commercial will host its 11th CSR Day – where sustainability leaders inspire and energise an audience of 250+ delegates to transform the way they do business. ■



Co-founder of Commercial Group Simone Hindmarch-Bye with former Mayor of Cheltenham Cllr Colin Hay and the Green Angels team that drove the company’s zero-waste-to-landfill achievement.