Morgan Lovell

Inspiring office transformation

SUSTAINABLE OFFICE DESIGN CHECKLIST

Your step-by-step guide to a 'green' office interior

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BEST GREEN COMPANIES

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SUSTAINABLE OFFICE DESIGN CHECKLIST

There are many reasons for making your office interior 'green', and if you do it right, going sustainable is as good for your business as it is for the environment.

A sustainable office interior uses less energy, and could save you at least 25% off your energy bills, year after year. And a healthy, natural work environment has been proven to raise productivity and lower absenteeism. Best of all, it doesn't have to cost you much more than a traditional office to design and build.

This checklist breaks down the complex issues into simple, easy-to-follow steps. Find out exactly what's involved, before you begin.

Before work begins

Be clear about your vision

- Get your Board or key stakeholders to buy into the benefits ☐
- Decide what level of sustainability you want to achieve
  - High ☐
  - Medium ☐
  - Average ☐
- Decide what **BREEAM*** rating you want to achieve
  - Outstanding ☐
  - Excellent ☐
  - Very Good ☐
  - Good ☐
  - Pass ☐
- Decide what **LEED*** rating you want to achieve
  - Platinum ☐
  - Gold ☐
  - Silver ☐
  - Certified ☐
- Define your project objectives
  - Increase energy efficiency to reduce ongoing costs ☐
  - Reduce carbon emissions ☐
  - Comply with **CRC Energy Efficiency Scheme*** reporting requirements ☐
  - Comply with (or exceed) building regulations (Part L, Part F) ☐
  - Comply with (or exceed) CIBSE and BSRIA Guidelines ☐

- Make better use of your space ☐
- Boost productivity ☐
- Create a healthier workplace (reduce **VOCs***, improve air quality) ☐
- Create or enhance your Corporate Social Responsibility programme ☐
- Communicate a sustainable ethos to staff, stakeholders and clients ☐

Assess and compare your potential buildings for energy efficiency

- Measure the CO_2 and CO emissions of the assessed building / office space ☐
- What is the difference in CO_2 emissions (by percentage) between your site, and a notional building that complies with 2002 building regulations? ☐
- Request a copy of the Energy Performance Certificate (EPC) and the associated building report ☐
- Choose a building that is already BREEAM (or LEED) rated ☐
- Measure the building's solar gain to assess the impact it will have on energy use ☐
- Check the compass direction of the space. Is it north or south? Assess how you can use daylight to reduce your lighting demand ☐
- What is the energy rating of the heating, ventilation and air-conditioning systems? Will they need to be replaced? ☐
- Does the space have a building management system, to enable the monitoring and control of energy use? ☐
- Is there sufficient sub-metering in place to measure and report energy use? ☐
- Are there enough public transport links to satisfy BREEAM standards? ☐
- Is there space for installation of bicycle racks and showers, to meet BREEAM standards? ☐

Drawing up the designs and sourcing materials

Build sustainability into the design

- Design flexible floor plans, that can be rearranged and reconfigured easily in the future, and reduce churn costs ☐
- Include convenient recycling points in the design ☐
- Incorporate locally manufactured materials, to cut down on the energy and carbon emissions it takes to transport them ☐
- Salvage and reuse as many materials that are already on-site as you can ☐
- Choose carpeting manufactured from wool or recycled fibres – go for woven carpeting, with minimal backing materials (especially petroleum-based ones) ☐
- Make the most of the available natural daylight
  - Make sure every desk is no more than 7m from a window ☐
  - Aim for 80% of the net lettable office floor area to receive natural light ☐

- Include a user-friendly glare control system ☐
- Use increased insulation ☐
- Choose highly efficient or 'super' windows ☐
- Use shading to reduce glare and heat from the sun ☐
- Choose a design that uses minimal finishes, paints, wall coverings and plastering ☐
- Minimise storage to encourage more electronic archiving ☐
- Incorporate signs that encourage your staff to turn off equipment and lights ☐

Choose sustainable office fixtures, fittings and furniture

- Are they manufactured from recycled materials? ☐
- Are they recyclable at the end of their life? ☐
- Opt for low VOC emitting carpets, furniture, cabling, paints and adhesives ☐
- Are they made by environmentally responsible manufacturers? ☐
- Are they produced locally? ☐
- Does your timber come from sustainable forests? Is it **FSC*** certified? ☐
- Use rapidly renewable materials wherever you can (like bamboo) ☐
- Think about what you can reuse ☐

Consider energy efficiency and carbon reduction

- Select high-quality, energy efficient lighting (see next section) ☐
- Put reasonable limits on your temperature controls for day-to-day use ☐
- Use zoned energy controls, to control low-usage areas separately ☐
- Install an automatic shut-off system for equipment on standby ☐
- Choose a Building Management System (BMS) to automatically turn off power at night and on weekends ☐
- Install smart, energy efficient heating, ventilation and air-conditioning systems ☐
- Choose items that qualify for **Enhanced Capital Allowances*** ☐
- Make sure 10% of the total energy demand comes from local renewable / low emission energy sources ☐
- Install wireless sub-metering to monitor, track and reduce energy use across floors / zones ☐
- Install 'workplace footprint tracker' software to control and display energy use on dashboards to encourage building occupants to reduce their individual energy use ☐
- Install devices to manually shut down workstations when not in use ☐

- Install timers on appliances to automatically shut down equipment out-of-hours (televisions, audio-visual, etc.) ☐
- Do you qualify for interest-free loans from the Carbon Trust? ☐

Be smart with your lighting

- Make sure you meet appropriate maintained luminance levels (in lux), as per building regulations ☐
- Use zoned lighting, with separate controls ☐
- Choose light fittings with built-in daylight sensors, to make the most of your natural light ☐
- Install infrared motion detectors for automatic lighting control ☐
- Install timers to shut off lighting on weekends and at night ☐
- Fit high efficiency fluorescent lights ☐
- Consider LED lighting. A standard 40W incandescent bulb has an expected lifespan of 1,000 hours while an LED can continue to operate with reduced efficiency for more than 50,000 hours - 50 times longer than the incandescent bulb ☐
- Use task lighting. Task lighting provides better light for detail work and offers more control to individuals, reducing the need for energy-hungry overhead lighting ☐

Waste less water

- Choose low water flow fittings
  - Low flush toilets ☐
  - Waterless urinals ☐
- Use rainwater or grey water systems ☐
- Fit a reliable leak detection system ☐
- Include proximity detection shut-off to the water supply for all WCs ☐
- Install point-of-source, filtered water to reduce the cost, waste and transport of bottled water ☐

Improve air quality

- Use more natural ventilation ☐
- Monitor and assess your CO_2 emissions ☐
- Use 'low emitting' materials, without volatile chemicals
  - Carpet ☐
  - Paints and adhesives ☐

Composite wood ☐

During the build

Ensure environmental best practice on site

Manage stripped out materials, to divert waste from landfills

- Donate unwanted furniture, computers and appliances to charity ☐
- Recycle plasterboard, carpet and other materials ☐
- Separate waste ☐

Follow the proper procedures to dispose of hazardous materials (with the paper trail to prove it) ☐

Prove you have a proper recycling policy in place ☐

Put a proper Environmental Management System (EMS) in place ☐

Use only FSC certified wood ☐

Fit out made CarbonNeutral ☐

Set targets for energy, carbon and water use on site ☐

After you've moved in

Talk to your people

Get feedback from your staff on your new office ☐

Communicate clearly about your ongoing sustainable goals and objectives

- Design presentations ☐
- Project extranet ☐
- Notice boards and company newsletters ☐
- Training on how to use all the systems (lights, heating and air, etc.) ☐

Make recycling part of everyday life

Set up lots of convenient recycle bins for staff ☐

Have separate recycle bins for paper, electronics, batteries, plastics, etc. ☐

Make the case for a 'paperless' office, encouraging electronic archiving instead ☐

Set clear policies on shutting down computers, copiers and appliances out-of-hours ☐

Make ongoing plans for the future

Educate your staff on environmental issues, to get them personally involved ☐

- Re-assess all your systems at the end of the first year ☐
- Plan to run an energy audit every year ☐
- Put procedures in place for monitoring your energy use ☐

Choosing a sustainable office design and fit out contractor

- What environmental credentials do they have?
  - ISO 14001 Certified (evidence provided) ☐
  - Company Environmental Policy (evidence provided) ☐
  - Company environmental management system – EMS (evidence provided) ☐
  - BREEAM assessors in-house ☐
  - LEED accredited professionals in-house ☐
  - Member of FTSE4Good ☐
  - Environmental management team in-house (not subcontracted) ☐
  - Environmental good practice on site ☐
    - Do they have a documented system for separating, managing and recycling waste on site? ☐
- What services are included, or on offer?
  - BREEAM assessments ☐
  - LEED assessments ☐
  - Building assessments for sustainability ☐
  - Can they supply FSC certified timber through their supply chain? ☐
  - Advice on Enhanced Capital Allowances ☐
  - In-house sustainability / environmental experts ☐
  - Sourcing and procuring sustainable materials, furniture and fittings ☐
  - Environmental compliance on site ☐
  - Project extranet for project communication ☐
  - Electronic surveys for your staff ☐
  - CarbonNeutral fit outs ☐
- Do they have a track record of sustainable projects? ☐
- Do they have case studies that show successful energy reduction? ☐

* What's that?

- **BREEAM**® (BRE's Environmental Assessment Method) and **LEED**® (Leadership in Energy and Environmental Design's 'green building' rating system) are the two most recognised and

authoritative systems for rating how 'green' or 'eco-friendly' a building is.

- **CRC Energy Efficiency Scheme** is a new regulatory regime that is intended to encourage large, non-energy intensive businesses (for example: retail chains, banks, local authorities and many institutional landlords) to improve their energy efficiency and reduce their carbon emissions.

- **VOCs** are volatile organic compounds, emitted by many paints, glues, wirings, carpets and other materials. They can be harmful over time.

- The Forest Stewardship Council (**FSC**) promotes environmentally appropriate, socially beneficial, and economically viable management of the world's forests.

- **Enhanced Capital Allowances** are a Government incentive, to encourage you to choose energy efficient heating, ventilation and air-conditioning equipment. You can claim back money for certain kinds of equipment.