



3 Acorns Eco Audits

EXAMPLE: BUSINESS ECO-AUDIT REPORT

London Based Agency

FAO: Chief-executive

Headline Figures 06/07

Electricity use:	386.2	tonnes
Gas	171.3	tonnes
Mileage: (petrol / hire / vans / taxis)	60.0	tonnes
Flights:	327.9	tonnes
Energy carbon footprint:	945.4	tonnes
Energy carbon footprint per employee:	4.2	tonnes
Mains water consumption:	6,880,000	litres
Mains water consumption per employee/per day (taking 226 full time equivalents and 253 working days per year)	120	litres
Non-recycled waste per year	5,060	black bin bags
Recycled paper per year:	38,000	Kg



Introduction

I would like to thank the chief-executive and all the other members of the management team and staff whose help and information in drawing up this eco-audit report was invaluable and really appreciated.

The average total CO₂ emissions per person is 9 tonnes per annum in the UK. The average annual emissions from a UK domestic house are 6 tonnes. Thus the total annual London Based Advertising Agency Group HQ emissions are the equivalent of 157 homes. In the eyes of some experts the climate crisis is so urgent, that we need to aim for a global average of about 1 tonne per annum if we are to avoid passing the irreversible tipping points that would lead to a disastrous run-away climate crisis. The global average annual CO₂ emissions per person currently are about 3.6 tonnes and increasing at a rate of 3% per annum.

The estimated energy carbon footprint at work per London Based Advertising Agency employee of 4.2 tonnes per annum demonstrates the size of the challenge facing the London Based Advertising Agency Group and similar office based companies.

Electricity

Electricity use at 41% is the single largest contributor to your energy CO₂ emissions. Whilst not abrogating the requirement to reduce this very high consumption, the switching to a green electricity supplier such as Good Energy, would be the single quickest and most effective first step to cutting your carbon footprint.

In addition, the eco-audit site visit identified significant wasteful practices in relation to electricity use that if addressed will help to significantly reduce electricity use. These include the widespread practice of air-conditioning rooms with open windows, the established practice of having lighting, air-conditioning and electrical equipment on in un-occupied conference rooms and the widespread use of very in-efficient lighting throughout the building. These can all be addressed with little or no investment but would require a change of culture.

Flights

Flights at 34.7% are the second largest emitter of CO₂. They also appear to be increasing exponentially, with a 60% year on year increase over 2005/6. In addition, the first 7 months of 2007, nearly exceeded the entire emissions for the previous calendar year, indicating that flights look very likely to take over from electricity in the coming year as your single largest source of CO₂ emissions. Whilst recognising how essential international flights are to a company like London Based Advertising Agency, it highlights the urgency of tackling the issue. Some suggestions are made to do this in the travel section below.



Gas

Gas use at 18.1% takes third place in your CO2 emissions. The largest issue to emerge re gas use in the building was the poor state of your windows. Whilst a substantial proportion of the building has been refurbished, almost no attention has been paid to the condition of the windows. A large number of the metal framed windows do not close properly. In addition, a high proportion of the sash-windows at the front of the building also do not close. Whilst appearing closed, there is however a large gap in many of them at the join of the two frames. Addressing this is one of the more urgent items that need attention to bring your space-heating CO2 emissions down.

Mileage

Finally petrol mileage at 6.4% of energy CO2 emissions is not as significant as it is in many other companies. However, tackling the taxi-using culture and switching to a low-emissions taxi company would help reduce its contribution to your annual emissions.

Water

Water consumption at an estimated 6,880,000 litres is really enormous for such a building. The possible main culprits are the gents urinals. If any of these have old fashioned regular automatic flushing controls, they can be wasting up to 200,000 litres per year each, compared to individual use controls. This needs to be looked into urgently and addressed. Other water-saving measures are listed in the report.

Report Structure

The rest of the eco-audit report is divided into sections dealing with management recommendations, human resources, energy, resource use, travel and events/catering. Each section has detailed recommendations for individual offices where relevant.

Business Opportunities

In addition to the challenge of reducing its current high carbon footprint, making the London Based Advertising Agency more eco-friendly, has also the potential to create new business opportunities and will assist retaining current eco-aware clients. The report includes suggestions for some new products that various arms of London Based Advertising Agency could develop and market to existing and new clients. For example the events team could develop an eco-event package to market to clients in the environmental field or those corporations seeking to improve their eco-image.

I really hope this report will help you to start taking the necessary practical steps to help achieve your ambition of making the London Based Advertising Agency both an environmentally responsible and continuing financially successful company.



Policy & Management Recommendations

1/ The Executive Committee should be asked to formally commit London Based Advertising Agency to being an environmentally responsible organisation.

2/ This report should be submitted to the Executive Committee as an information item with any recommendations requiring their approval down for decision.

3/ The job-description of the chief-executive should include the responsibility for the policies and actions to implement this commitment and to formally report progress annually to the Executive Committee in the form of an internal or external eco-audit of the organization, presented at the same meeting at which the annual accounts are approved.

The annual eco-audit should include the following bench-mark measurements where possible:

- A/ Kwh electricity used
- B/ Kwh gas used (calculated as a percentage of the building's total use)
- B/ Number of first class and other flights taken by staff during the year
- C/ Any mileage / number of taxis paid for during the year
- D/ The actual energy Carbon Footprint of the organisation – calculated from the above figures.
- E/ Percentage of staff who do not use private vehicles for transport to work
- F/ Number of litres of water used. (calculated from a percentage of total building's use)
- G/ Litres or number of black bins bags of **un-recycled** rubbish produced during the year.
- H/ Percentage of paper and publications that were printed on recycled paper during the year.
- I/ Percentage of catering that used organic produce.
- J/ Any other relevant environmental information including progress on implementing eco-audit recommendations and successes in enabling clients and suppliers to be more environmentally responsible.

4/ London Based Advertising Agency should adopt a formal Green Purchasing Policy which would include the principles of reduction, re-use and recycled materials. This would mean that the purchasing policy would follow a hierarchy of:

- i/ firstly reducing volume of goods required e.g. switching to from bottled water to mains filtered water-coolers.
- ii/ secondly seeking to buy re-used materials e.g. only buying good quality re-used office furniture rather than buying new furniture
- iii/ thirdly using products made from recycled materials e.g. using recycled paper for publications rather than virgin paper.



5/ The chief-executive should ensure that procedures that ensure that waste reduction, recycling and energy efficiency monitoring are in place, whether it is by including this in particular staff members job-specifications in each team or otherwise.

6/ As much of London Based Advertising Agency's environmental footprint is dependent on the management of part of the building in which they are tenants, it should seek to encourage its landlord to start putting environmentally sound practices in place in how the building is run.

7/ Adopt a long term aspiration of zero non-recycled waste and zero carbon emissions.

Most Urgent Issues

1/ Ensure all windows are refurbished so that they can all be easily closed and both windows and doors are properly draught-proofed.

2/ Replace all non-energy saving bulbs with energy saving versions.

3/ Adopt a policy that lighting, air-conditioning and TV equipment should not be left on in empty rooms.

4/ Adopt a policy that air-conditioning can only be used in rooms where the windows and doors are closed.

5/ Ensure all urinal controls are switched to an individual-use basis.

6/ Seek to use natural daylight where practical.

7/ Seek to use natural ventilation where practical.

8/ Ensure temperature settings for heating and air-conditioning are correctly set. 19C for heating in winter and 25C for air-conditioning in summer.

9/ The exponential rise in the use of international flights will likely overshadow the potential savings in HQ CO2 emissions and so measures to tackle this issue are important.

10/ Ensure various issues raised in the report on lighting, heating, air-conditioning, materials used and water efficiency become immediately integrated into the ongoing refurbishment programme.



Human Resources

1. Staff contracts should be amended in consultation with the staff to include a requirement that all employees will be expected to assist London Based Advertising Agency in delivering its commitment to being an environmentally responsible organisation in how they carry out their functions as members of staff.
2. Induction procedures for new staff and any staff handbooks should be altered to include procedures adopted to implement this policy of environmental responsibility. The staff handbook is already only produced in electronic format, which saves paper and also avoids reprinting being required when updated.
3. An environmental management structure from the chief-executive downwards should be drawn up, to ensure relevant job-specifications at all levels include environmental responsibilities and reporting structures are in place.
4. Once the new approach to environmental responsibility has been adopted by the management team, make a staff presentation on how it will work and how they can contribute.
5. Such presentations should be made at least annually to ensure updated procedures are conveyed and to ensure positive momentum is maintained and to provide a forum for staff for any difficulties with the process to be addressed.
6. A named partner on the executive team should be responsible for implementation of eco policies. This can then be delegated possibly via the chief-executive to named members of staff in each area of business – e.g. Facilities manager, Conference Centre manager, and one staff member responsible for each section (canteen, Building 3, 5, etc.). These staff members would supervise energy use and recycling. Quite different approaches may be needed for different sections of the company.
7. Suggest staff motivation strategies for the various sections of the company e.g. emailed monthly figures or displays of electricity/gas/water/taxi/plane use. Competitions for staff might be used e.g. greenest staff member, smallest carbon footprint, best idea for improving company's eco performance, person who contributed most during year to reducing company's environmental footprint etc with an eco-prize for the winners.



Energy

Current Good Practice

1. Facility manager has set the hot water controls (6.00-18.00) and temperature (60C) correctly. Ensure timings for heating are appropriately set for weekends also.
2. Gas central heating boilers are being replaced with 90% efficient ones.
3. Conference Centre:
 - (a) Windows are in good condition – i.e. not draughty.
 - (b) Kitchen windows are double-glazed.
4. IT:
 - (a) PCs and monitors get switched off.
 - (b) New staff are offered a choice of desktop or laptop computer which use up to 90% less energy.
5. Finance: The metal-framed windows fit well.
6. Main advertising office:
 - (a) At the far end, TV screens and air-conditioning were off when I visited.
 - (b) Radiators under windows have shelves above, which direct heat into the room.
7. Smaller advertising office:
 - (a) The fireplace has been sealed up.
 - (b) The meeting room has a light-sensor.
8. Building No3: Fifth floor gents: The windows are double glazed.
9. London Based Advertising Agency have committed to offsetting their annual carbon footprint.

Next Steps

1. Ensure that all tungsten light bulbs, including candle bulbs are replaced with energy saving bulbs. Tungsten bulbs use 500% more electricity than energy saving bulbs. Energy saving light bulbs now come in a range of styles that will fit most requirements, including candle-bulbs (e.g. for TV lounge lamps and formal meeting room chandeliers). They are no longer just big and clunky! A wide range including very small bulbs and halogen fitting bulbs is available from www.ebulbshop.com or from www.commercial-lamps.co.uk www.bltdirect.co.uk

The widespread use of halogen down-lighters is one of the more significant problems facing the building. Each halogen lamp uses up to 50 watts each and the fact that they are recessed in the ceiling means that significantly more lamps have to be used. Thus an area that could be lit with 40 watts worth of energy saving lamps can use up to 1000 watts of halogen lamps. In addition to the huge increase in electricity required to light the area to the same level of lighting, the high wattage also means that you have the equivalent of a large number of electric heaters giving off heat in the middle of summer in your ceilings. This in turn means that the air-conditioning has to counteract this enormous heat load, before even starting to reduce the background summer heat.

Halogen energy-saving replacement which use one fifth of the energy, will only fit normal voltage fittings i.e. not with low voltage transformers. However, Osram are bringing out a new range of more energy efficient bulbs for low voltage halogen fittings in September 2007, which will use 30% less energy than existing halogen bulbs. Whilst these will still use up 300% more energy than normal energy saving bulbs, at least it would be a step in the right direction for the large number of wasteful halogen bulbs on the premises.

2. When replacing fluorescent tubes, ensure they are A-rated (typically 38 watts rather than 70).
3. When installing new lighting, avoid fittings intended for low voltage halogen bulbs but instead install fittings that use energy saving lamps and avoid recessed down-lighters which waste a large percentage of their light in the recess and so require far more fittings than is necessary. .
4. The floodlighting of the front of the building uses nearly a thousand watts. It is good that it goes off at midnight and so does not remain on all night. However, is it necessary at all? If so, could it go off earlier, or be put on movement sensors if required for staff?
5. Liaise with security firm to ensure their staff are trained to turn off lights and air-conditioning in unoccupied rooms at night.
6. Likewise liaise with the cleaners to ensure that lights are turned off after rooms have been cleaned.



7. Keep doors and windows of air-conditioned rooms closed.
8. Put in seven-day controls for the air-conditioning. Reportedly the new air-conditioning controls recently installed cannot be programmed separately for weekends. This needs to be addressed urgently so that different requirements can be allowed for, otherwise significant waste of energy could take place at weekends.
9. The blinds in some of the rear meeting rooms are lowered due to the fact that the light-wells at the rear of the building are not very nice to look at. Investigate possibility of training plants up along the walls to make them look green and so allow blinds to be raised during daylight hours to facilitate the use of natural lighting.
10. Some studies have found that if ties are not used that the requirement from staff for air-conditioning drops. Assess if the rule for ties to be worn at all times by male staff, could be changed to requiring them to be worn only when meeting clients?

IT:

1. Set power management on all PCs to full energy-saving mode. Be sure to inform staff via email re changes, explaining why it is being done and what it means for operation of the PCs.
2. When reminders are sent to turn off PCs, include a request to turn off the monitors as well.
3. Investigate the practicality of centralised turning-off of PCs and monitors by IT (Wake –LAN facility). This allows IT to ensure all PCs are turned off but also allows them to turn them on if they need to update software during the night.
4. Get 7-day timers for photocopiers, with manual override.
5. Ideally, stop offering desktops, as they use between three to ten times the energy as laptops. This will also help to reduce the heat released by electrical equipment in the offices which in turn will reduce the need for air-conditioning. This recommendation would significantly cut energy used for IT by the company.



Conference Centre

1. Reception:
 - (a) A radiator is boxed in under a window. Remove the screen, leaving the shelf is possible, and put reflective insulation behind the radiator.
 - (b) The TV was left on under the stairway, even though there was no one present.
 - (c) The main door needs draught-proofing and a door brush.
 - (d) First floor kitchen (used by outside caterers): Between events, turn off empty fridges or train staff to turn on only when used. When I visited, both were nearly empty.
2. When replacing table linen, get a dark colour that matches the decor. Dark colours can be washed at lower temperatures, so they last longer, do not stain as easily and take less energy to wash.
3. Conference room on the ground floor: When I visited, the room was empty, with lights, audio-visual equipment and air-conditioning left on. This is a very wasteful practice which should be stopped.
4. Ensure flowers are locally grown and ideally also organic. Fast Flowers for example have a range of locally grown flowers. www.fastflowers.co.uk

Staff Canteen:

1. Are lights on steps necessary during daytime? If only there for aesthetic reasons, turn them off.
2. More light switches are needed, so that lights near the windows can be switched off in bright daylight.
3. None of the four metal-framed windows will close and two panes are cracked. They urgently need refurbishment, and ideally should have secondary-glazing added. Alternatively replace them with double-glazed FSC (Forestry Stewardship Council) wooden windows.

FINANCE:

1. I was not able to investigate the ceiling in the main finance office but it is likely that it has never had any insulation installed. Get a professional insulation company in to quote on options. Up to 30% of heat is lost through the ceiling and roof-insulation is one of the most cost effective ways of reducing heat-loss from buildings.
2. Ideally, install secondary double glazing on the windows.
3. It would be good if all windows the windows were refurbished so that they could open to allow for natural ventilation in summer and reduce the need for



electric fans.

4. Clear filing cabinets from in front of radiators, to allow heat into the room.
5. The fridge is far too big for requirements – replace with one half the size.

Building No1:

1. Desk lamps need energy-saving bulbs.
2. Put in more separate switching for lights to allow staff greater control over level of lighting.
3. Put anti-glare film on windows and raise blinds during daylight hours so that artificial lights do not have to be on during daylight hours. Angle of monitors or positioning of staff might also need to be changed slightly to prevent glare on screens.
4. Currently some staff feel there is no need for artificial lighting during daylight hours but have to have theirs on, as some others want extra artificial lighting. Providing personal desk lamps for those who want extra lighting during daylight hours, would reduce this source of conflicting wishes.
5. The ceiling of the entire room is bounded with halogen lights, which are superfluous in daylight. Turn them off. This will reduce over-heating of office in summer and reduce stress of over-head glare for staff.
6. We were not able to locate a thermostat reading for the room during the audit. Find out what the temperature setting is for the air-conditioning is currently and ensure that it is set to the 25C recommended setting.
7. The air conditioning is reportedly frequently on with windows open. This means that cooled air is constantly escaping and so requiring the system to work much harder. There should be a formal management policy that if the air-conditioning is on, then the windows must remain shut. Alternatively turn the air-conditioning off except during the hottest weather and arrange for windows at front and rear of the building to be open-able, to allow a throughput of air providing natural ventilation.
8. The windows at the front of the building may be suitable for retro-fitting double-glazing. The Sash Window Workshop will send a mobile van and retro-fit the windows on the spot. They also provide a professional refurbishment and insulation service. Their Free-phone number is 0800 597 2598, if you want to get a quote.
9. When buying TV screens, check energy ratings. In particular, buy LCD rather than plasma.

Building No 2:



1. Get seven-day timers for the photocopiers.
2. The meeting cubicles have no light switches. Switches and sensors for each one should be installed to control the lighting.
3. Radiators:
 - (a) Radiators are placed on external walls. Install reflective insulating panels behind all external wall radiators. This will direct more of the heat into the premises rather than being lost to the outside.
 - (b) Remove screens from radiators and paint them.
 - (c) Windows: Install thermal shades and have security close them at night, in order to prevent the rooms heating up in the morning before the staff turn up in summer.
 - (d) If air could flow front-to-back through the main offices, less air-conditioning would be needed. The windows at the rear of main office would need to be open-able.
 - (e) Many of the windows at the front of the building do not close due to paint but confusingly look closed when they are not.

Building No 3:

1. Conference Room:
 - (a) Air-conditioning is being lost through the hall door which needs to be kept closed and needs the keyhole sealed up and a door brush for the bottom of the door.
 - (b) Blinds were down halfway. Opening them would provide natural light during the day.
2. The heating was on in the hallway of no. 15. This was dealt with later following discussions with the maintenance staff.
3. Server Room (in the basement):
 - (a) Ask IT to check the manufacturer's recommended air-conditioning temperature and set the system accordingly.
 - (b) The lights were on unnecessarily, wasting electricity and increasing air-con requirements; install a movement sensor.
 - (c) There is a large gap under the door to the server room, thus losing the cool air created by the air-conditioning. Put in a door brush.
4. Main front door:
 - (a) The door needs strip insulation, a door brush, a keyhole flap, and insulation for the letter box.
 - (b) Replace the missing pane of glass in the fan light, and add secondary-glazing.
5. The ground floor lobby is not used, but has a light on. Put in a separate switch so it can be turned off.



6. Covers Room:

The fireplace needs sealing to prevent cold draught coming down through the un-used chimney. You could be losing up to 30% of your heat via this route, when fireplace is not in use and central heating is on in the room. You could reduce this by installing professional chimney balloons. Available from www.chimney-balloon.co.uk They cost about £20 each.

7. Conference Room 2:

- (a) The up-lighters use an enormous 300 watts each. Thus 1400 watts are being used, even when the room is empty. This also means more air-conditioning has to be used to counteract the heat they produce. Replace with energy-saving lighting e.g. standard lamps fitted with energy saving bulbs and turn it off when the room is not used.
- (b) The conference-call equipment uses 14 watts continuously when on standby. Switch it off when not in use.

8. For the new Facilities Area:

- (a) Ensure the new outside door is double glazed and insulated, has a door brush and key-hole covers and closes automatically.
- (b) Install a door in middle doorway of new facilities area onto the corridor, to reduce air-conditioning requirements.
- (c) The new toilets: Install presence sensors for the lights.

Building No 4:

1. Are drinks fridges really necessary in every conference room? This is very wasteful. They contribute to the heat that then needs to be made up for by the air-conditioning. The best option would be to have one stocked fridge per group of meeting rooms rather than one in every room. At a minimum turn them all down to 1, as no meat is stored in them.
2. Ladies' toilet in basement: Sensors are needed for the lights. Separate cubicles also need light sensors, either movement or operated by the doors and electric hand-driers.
3. Reception room: It has two TVs, one using 330watts and the other 100watts. Do both really need to be on all the time? If not, turn off the higher wattage television. Ideally, if practical, the televisions could be turned on by receptionists only when visitors are waiting via a standby-buster remote control.
 - (a) All table lamps were on and the curtains closed half-way. Turn off table lamps during bright days and raise curtains fully to allow in natural light.
 - (b) The air-conditioning and the central heating were both on simultaneously.
4. Kitchen in flat:
 - (a) Investigate why the heating was on, even though it was summer and un-occupied.
 - (b) The fridge was set at 9 (very high!). Reduce to 1 if being used or turn off if not.



The wine store appears to be air-conditioned but not draught-proofed. This needs addressing.

5. Basement kitchen: Train staff to only boil enough water in the kettle for what they need.

Renewables

Green energy tariff

The quickest method of tackling carbon emissions from electricity use would be to switch to a green electricity tariff. These providers source their electricity from renewable sources such as wind, hydro and solar. Good-energy and the 100% option from Ecotricity are considered to be the best and next best green energy standards respectively. www.good-energy.co.uk www.ecotricity.co.uk

Signing up to a green electricity supplier would eliminate all your CO2 emissions for electricity in those premises supplied. This of course would not remove the need to reduce your high electricity consumption, as there is not enough renewable energy to replace all the current fossil fuel powered electricity.

On-site renewable energy

SOLAR HOT WATER

The roof of Building No 5 could be suitable for solar hot water. You would need to bring in a solar hot water engineer to see if it would be feasible to integrate it into the building's current hot water system.

Further information and list of suppliers available at the Energy Savings Trust website. www.est.org.uk or the Low Carbon Building Programme.

Chiltern Future Energy will do a free site assessment and quotations for both types of solar energy (tel 01491 845 506), as will Southern Solar www.chilternfutureenergy.co.uk info@southernsolar.co.uk

BIOMASS CENTRAL HEATING BOILER

A very radical option for central heating would be to switch to biomass. The current car parking area might provide sufficient space for such a system, as well as a convenient delivery point. For space heating the most feasible renewable energy option is an automatic wood or wood pellet central heating boiler.

These are expensive to install but there are grants available to private companies via the Low Carbon Building Programme. Clean woody material is processed into wood chip or wood pellet fuels that are delivered to a fuel store adjacent to the boiler house. The fuel is automatically fed into the boiler by a screw feed auger mechanism, regulated by a boiler control panel. Somerset Council has found the running costs on such a system can be even lower than mains gas central heating Information at: www.woodenergy.co.uk



Travel

Current Good Practice

1. Travel loans are provided for staff.
2. Cycle parking is provided.
3. There is a cycle email group.

Next Steps

1. Put a company travel plan in place.
2. Ensure government tax discount scheme for new cycles is made available to staff.
3. Challenge the heavy taxi-using culture:
 - (a) Trial the two new low-carbon taxi companies: www.climatecars.com and www.greentomatocars.com. Both of these companies use only the prestigious low-emissions Toyota Prius hybrid cars and offset remaining CO2 emissions.
 - (b) Provide in-house cycles.
 - (c) Pay a cycle allowance for using cycles rather than taxis.
 - (d) Monitor total number of taxis used per month and email to staff or put up on a poster.
4. Flights:
 - (a) Encourage use of no-frills airlines, and cut back on first class where possible. First class seats use up 50% more CO2 per person per flight. The no-frills airlines generally have the most fuel efficient fleets and the highest occupancy, thereby reducing CO2 per passenger mile.
 - (b) Nearly a quarter of total flights are domestic. Promote a switch to trains and monitor progress.
 - (c) The fourth-highest flight destination is Brussels. Whilst a significant number of journeys are already being taken by Eurostar, aim for a target of zero London-Brussels/Paris flights, using Eurostar instead.
 - (d) The CO2 emissions data for flights does not specify whether they took account of extra tonnage involved by using first class seats. As the tonnage is estimated to be 50% greater for first class seats due to greater space taken and the fact that flight emissions make up such a significant section of London Based Advertising Agency's total emissions, means this needs to be clarified for future annual carbon footprint reports.
5. Try to use more video-conferencing, especially to replace long-haul flights.
 - (a) The video-conferencing facilities in the building are reportedly rarely used. I suggest using them for in-house meetings, to replace phone conference calls, in order to give staff and senior executives, greater expertise in using the technology.
 - (b) I would also suggest increasing the availability of video-conferencing facilities in your international offices to help reduce internal London Based Advertising Agency flights. Costs might be offset by



offering use of it to your clients, as a way of helping to reduce their own carbon footprints.



Resources

Current Good Practice

1. All the buildings are water-metered, which means you are environmentally accountable for your water use.
2. A quote is being sought for recycling. Try Paper-round for an alternative quote.
3. IT: Colour printers are set to print in black & white by default.
4. 65% recycled paper is currently used. 100% would be even better. Get some samples and check them out. Evolve is one of the leading UK brands for 100% recycled paper. Paper-round supplies Evolve which is made from the paper they collect at a plant in Kent!
5. Printer cartridges are recycled.
6. The ladies toilet in the basement has spray taps on the basins.

Next Steps

1. Place a water hippo, brick or water filled plastic bottles in toilets that have cisterns larger than the modern standard of 6 litres, to reduce water wastage per flush. Experiment with half litre bottle first and if they continue to work well, place another one in, until you reach balance between efficiency and effectiveness.
2. Install an Interflush device on all toilets with handles that do not already have dual use controls. Available from www.interflush.co.uk . Cost: about £20 each. These enable the toilet to stop flushing when the handle is let go and so can save up to 6 litres per flush. Experiment with one to begin with and if successful on your systems, install them on all relevant toilets.
3. Cleaning:
 - (a) If they insist on using chemical cleaners, ensure it is no more than once a fortnight.
 - (b) The cleaning cupboard in the London Based Advertising Agency staff canteen has a large stock of hydrochloric acid. Use eco-friendly cleaning products instead. Bio-D is an English company that produces such products and they are available online from the Natural Collection website. www.naturalcollection.com or directly from Bio-D website.
 - (c) Ask the cleaning company:
 - i. if they could use bag-less hoovers.
 - ii. if they have an eco-policy and how it is implemented.
 - iii. if they could use biodegradable black plastic bags and eco-friendly cleaning products.



- (d) When re-tendering the cleaning contract, ensure eco-criteria are taken into account. Do not just accept a formal environmental policy but ask for examples of how they implement it.

4. Recycling:

- (a) Reverse the bin arrangement – i.e. have recycling bins by desks and central non-recyclable rubbish bins. This will make it much easier for staff to recycle when you get a recycling system up and running.
- (b) Once the system for recycled paper desk bins is in place, stop practice of lining these bins with unnecessary plastic bags. This will cut bag use by up to 50,000 plastic bags per year on the premises.

5. IT:

- (a) Current printers do not print double-sided. Ensure new printers are set for duplex printing by default.
- (b) Set London Based Advertising Agency photocopiers to copy double-sided by default
- (c) Ensure that all redundant IT equipment is recycled.
www.envirogreen.co.uk provide an IT recycling service that will provide SEAP certified hard-drive destruction.

6. Finance:

- (a) Toilets:
 - i. Get rid of paper towels, and replace with electric hand driers.
 - ii. Install push-button or sensor controls for urinals or install waterless urinals.
- (b) The water cooler uses bottles. Switch to one fed from the mains.
- (c) Avoid anti-bacterial washing-up liquid. Switch to Bio-D or Ecover.
- (d) Buy only envelopes made from recycled paper.
- (e) Ensure when financial archives are disposed of at end of statutory period that they are recycled.
- (f) Photocopiers: Put up notices reminding staff about two-sided copying and promote copying onto scrap paper when clean paper is not needed for internal purposes.
- (g) Get headed notepaper, comp slips, and business cards printed on recycled paper, and have “Printed on recycled paper” included in the artwork.
- (h) Check whether Forest Stewardship Council (FSC) wood is being used for refurbishment in the server area?



(i) For the new Facilities Area:

- i. In the new toilets, put in ultra-efficient toilets.
- ii. Ensure spray taps are installed (which cut water use by 30%)
- iii. Install aerating shower-heads. They mix air with the warm water to reduce water consumption, without affecting quality of pressure. Hansgrohe do some elegant aerating shower heads, costing about £30. Available from: <http://www.aquabrand.com/prodlist/18-raindance-and-raindance-air-hand-showers> . Cheaper version available from the Natural Collection website.

7. Building No 3:

(a) Ladies' toilet in basement:

- i. Electric hand driers would cut out paper towel waste.
- ii. Switch to bars of soap on magnetic holders, rather than plastic bottles of chemical based bottled anti-bacterial soaps with Triclosan. Use of such anti-bacterial products for general use increases danger of creating wider bacterial resistance..

(b) Be sure to use recycled toilet paper.

8. Building No 4:

- (a) The urinals appear to have no controls and to flush 24 hours a day. This could be wasting up to 200,000 litres per year. Put in controls that flush only when used or consider retro-fitting waterless urinals. These can be retro-fitted onto existing urinals. Waterless urinals have been installed in all LSE (London School of Economics) and Kingston University urinals very successfully. www.watersolution.com
- (b) Basement kitchen: Replace sugar sachets with sugar shakers.
- (c) Current facilities area: The shredder should be turned off when not in use.

Events/ Catering

Catering considerations:

1. Replace bottled water where possible with water in glass-jugs. If you have to use bottled water due to clients' request, use English bottled where to reduce transport miles.
2. Ensure disposable crockery and cutlery is avoided where possible.
3. Seek to use washable napkins where practical and if paper versions have to be used, ensure that they are made from recycled paper and branded as such.
4. If advising clients on menus, encourage use of organic, local and vegetarian options. Meat uses significantly more environmental resources than vegetarian options, so having for example a non-meat starter would cut the impact of the meal.
5. Ask for any fish to be MSC verified as being from sustainable sources.
6. Ensure lighting and electricity is not wasted at events by turning off unwanted



- lighting and equipment.
7. Seek to encourage use of organic English or European wines and replace tetra-paks of imported juices with fresh fruit and water.
 8. Seek to provide organic fair-trade teas / coffees / sugar / milk. Do not provide sugar sachets but instead provide sugar lumps or sugar shakers.
 9. Seek to use venues with good public transport links to reduce necessity for attendees to use private transport.

Current Good Practice

1. The outside caterers are already using organic meat, vegetables, butter, bread, and nibbles.
2. Linen napkins and real crockery are used in-house.

Next Steps

1. Consider how to make it known that organic food is being served. Printed on menu cards, perhaps?
2. Ask suppliers and venues what their environmental policies are and what evidence they can show for them.
3. If buying table linen for the new top-floor dining room, avoid white linen, which requires particularly hot water to wash.
4. Provide jugs of water, rather than bottled.
5. Avoid use of difficult to recycle tetra-paks of imported juices and replace with fresh local fruit and water.
6. Install a filter water cooler for the new dining rooms and fill jugs from it.
7. For outside events:
 - (a) Request water in jugs, or if that is not possible, English bottled water.
 - (b) Request MSC (marine stewardship council) certified fish and organic food options.
8. In-house catering could be switched to organic / fair-trade, as the outside catering already is, including nibbles etc.
9. Wine bottles are currently dumped – get recycling facilities in.
10. Start serving organic wines – UK and French options ideally.
11. When catering for outside clients, ask whether they would like organic food and drink, and would be happy with jugs rather than bottles of water.
 - (a) Develop eco / organic options to offer clients for in-house catering – i.e.



corporate dining / meetings. This could this be a new business opportunity for corporate clients who are striving to achieve an eco-friendly image.

Staff Canteen:

12. The fridge is set at 1C. Change it to 5C. Check that all other non-meat storing fridges are also at that temperature.
13. Vending machine area:
 - (a) Put lights on person sensors.
 - (b) Empty the almost-empty display cabinets and turn them off.
 - (c) Get seven-day timers for drinks vending machines, so they are not on 24 hours a day.
 - (d) Turn off internal display lights permanently if not necessary.
 - (e) Ask suppliers if they can supply any organic drinks for vending machine.
14. Fruit juices are currently provided in individual cartons which are currently un-recyclable. See whether the supplier can deliver juice in returnable bottles or recyclable plastic.
15. See if milk can be provided in returnable bottles.
16. Stop providing one-use wooden spoons for stirring drinks and replace with real spoons.
17. Serve salt and pepper in cruets, rather than paper sachets.
18. Serve sugar in lumps or from a shaker, rather than sachets.
19. Replace honey sachets with a dispenser.
20. Provide organic fair-trade teas and coffees and organic bread.

Refurbishments

There is an on-going refurbishment programme going on within the building. Refurbishment provides one of the most valuable opportunities to improve your environmental performance. I thought therefore it would be worth providing a quick check list to be addressed for all such ongoing refurbishments:

- 1/ Install person sensitive lighting for store-rooms/ toilets
- 2/ Ensure as many lights as possible have individual switches
- 3/ Specify the most efficient toilets on the market which use 4.5 litres per flush. Also consider using waterless urinals (in use already in some new Trust House Forte hotels.)
- 4/ Seek to avoid need for refrigeration and only buy A+ rated white goods.
- 5/ A refurbishment provides a unique opportunity to install wall insulation, which would otherwise involve too much disruption. Up to 50% of heat loss is through walls and your building is pre-cavity wall.
- 6/ If installing or moving radiators ensure they are located on internal walls. If radiators are already on outside wall and are not being moved, ensure project includes placing insulation behind them and placing a shelf above them, if they are on an outside wall. No screens should be placed in front of outside wall radiators.
- 7/ All lighting fixtures should be able to have energy saving bulbs installed. Do not use any halogen down-lighters in any new lighting design. Do not use recessed down-lighters or obscured up-lighters in lighting design.
- 8/ Specify organic paints for all internal use – these are considerably more expensive but contain no toxic VOCs which remain in the office for years after painting and contribute to sick-building syndrome, as well as being damaging to the health of the painters. www.ecospaints.com
- 9/ Specify natural floor coverings.
- 10/ Request that all new timber used in the project should be from FSC certified sources (Forestry Stewardship Council)
- 11/ For communal areas that are not heavily used such as stairwells, consider person operated push button timers for the lighting
- 12/ Install effective window blinds in windows that receive direct sunlight
- 13/ Ensure you install push-button, spray taps with flow regulators in bathroom sinks
- 14/ Install electric hand dryers in preference to paper hand-towels in bathrooms
- 15/ Ensure that the contract includes the installation of above modern standards of insulation in the roof. There are a number of eco-friendly alternatives to the mineral wool insulation whose production is very energy intensive e.g. Warmcel, Thermafleece.
- 16/ Ensure furniture layouts maximize use of natural light i.e. the desks are placed to take advantage of light from the windows.
- 17/ Ensure that all bulbs specified for new light fittings are A rated.
- 18/ Only use good quality re-used furniture.



Eco-audit Implementation

- 1/ E-mail eco-audit report to all staff.
- 2/ Ensure progress in implementing the eco-audit is a standard item on regular management/staff meetings.
- 3/ Change appropriate job specifications to include supervising waste reduction, recycling and energy efficiency initiatives.
- 4/ Management should discuss/brain-storm with each section of the staff team on how to implement environmental improvements in how they deliver their work.
- 5/ When approaching the building owners, inform them that investments in water saving devices from the Water Technology list qualify for tax relief via the Enhanced Capital Allowance Scheme. www.eca-water.gov.uk

Likewise Enhanced Capital Allowances (ECA's) permit 100% of the capital cost of energy efficient equipment selected from the Energy Technology List (ETL) to be claimed against corporation tax. www.carbontrust.co.uk

- 6/ Energy-Efficiency Loans from the Carbon Trust help save money when you replace or upgrade existing equipment with a more energy-efficient version.

Small or medium-sized enterprise (SME) in England can borrow £5,000 to £100,000 unsecured and interest free loans to fund projects such as lighting, boilers or insulation. <http://www.carbontrust.co.uk/energy/takingaction/loans.htm>

- 7/ Set up an environmental performance section on your website, including your annual eco-audit report.
-

Eco Auditing Page – I want this page to be mainly about company and organisational eco-audits. Intend to do separate page on home eco-audits.

Please change company name throughout page and website from 3 Acorns Environmental Transformations to 3 Acorns Eco-audits.

Also wherever I used the term environmental auditing – please change it to eco-auditing.

Add to list of what the eco-audit includes “

* Energy and Environmental Footprint

At end of list add “Our approach is not to find fault but rather to discover what you are doing well already and to help the process of improving your environmental performance constructively. We feel a return visit is essential if you are to get the full value of the time and money you have invested in the audit.”

Please delete the section starting “His individual audits include.....star Linda Robson.”

Add to list of organisations eco-audited:



RNID

Brunswick Group LLP (international corporate communications partnership)

Down Hall Hotel

Centrepont

Good Energy (green electricity company)

Seatons Solicitors (Corby)

Crisis

MotivAction (corporate events company)

Excelian (financial IT solutions company)

Ealing Studios

Oakbank School, Yorkshire

NCVO (National Council for Voluntary Organisations)

Vitality Foods

CVS

Stanley's Post (post production company)

Merton VSC

Sutton Citizens Advice Bureau

Calibre (Talking Books Library)

Glebe House Therapeutic Community, Cambridge

Park House Nursing Home

Hackney Community Transport

ROTA (Race on the Agenda)

East London Mosque

Worthing Churches Homeless Projects

Association of Charitable Foundations (ACF)

Association of Chief Executives of Voluntary Organisations (ACEVO)

BBC Daily Politics Show (waste audit)

The Building Exploratory

Delete from "what is unique package for companies includes:"

Replace with: "Our eco-audits include:"

Change sentence starting with "* pre-audit meeting with management" to "meeting with management"

Change "Free 6 month return visit" to "Return visit after one year included"

Add to list " * A comprehensive, detailed electronic report detailing where your organisation already has good environmental practice in place and list of recommendations on how to improve."

In sentence starting with "Our approach to family and" Please delete "family and". Basically I want this entire page to be just about Business/Organisations Eco-auditing.

Add to what they said section:

"We really appreciate the time you have taken to produce such a thorough analysis."

East London Mosque

"We are happy clients" Brunswick Group LLP



“Your audit was thorough, thought-provoking but also very interesting and enjoyable”
Seatons Solicitors, Corby

“This report looks terrific. You've really done an incredible job of making sense of the studio and all its various spaces. Wow, you're good!” Ealing Film Studios

“Thanks for inspiring me and the team over the time you have been doing the eco-audit.” MotivAction

”Thanks for the eco-audit report on HCT, it has gone down very well with the senior managers and we are going to take it to the next board meeting. Unlike other work we have had done in this area your report has set out very clear recommendations.”
Hackney Community Transport”

What Does it Cost Section:

Until I have drafted home eco audits page, can you change cost of home eco-audit to £200.

To section of business charges, add sentence saying “We have special small business, schools and charity rates – details on application.”
