

Environmental / Sustainable Purchasing - Good Practice Guidance

This guidance provides advice and information to help those responsible for purchasing to identify and consider the main environmental issues in their purchasing decisions. It gives information on the main environmental and sustainability implications of certain products and gives examples of good purchasing practice.

Sustainable Purchasing Principles

The production of all goods, services and products has some form of environmental impact. To limit this impact;

- Reduce the amount you buy, don't over order.
- Choose products which are durable, repairable or refillable rather than disposable.
- Buy products made from recycled material or at least from renewable sustainable sources.
- Choose products that can be recycled.
- Choose products that have minimal or no packaging.
- Choose local products and services – reducing global emissions from transport and contributing to local regeneration.
- Choose water and energy efficient models to reduce consumption rates.
- Choose products made by companies with accredited environmental management systems.

PRODUCT PURCHASING GUIDE

PAPER PRODUCTS

What are the issues?

- Paper production requires high energy use, and contributes to deforestation, global warming and acid rain.
- Paper production can involve pollution through use of chemicals – the bleaching process used to whiten paper can involve the use of chlorine gas and production of toxic dioxins.
- Paper production from new woodpulp uses very large volumes of water.

Good Practice

Develop an office paper policy; reduce the amount of paper used e.g. use scrap paper for notes etc., always do double-sided photocopying (photocopiers are available that do double-sided copies automatically) write on both sides of the paper, avoid unnecessary multiple copies, use a central memo board, use electronic mail etc.

Purchase recycled paper for photocopying/computers, all other stationery including files, binders, storage boxes etc.

Purchase recycled paper with as high as possible post-consumer waste fibre.

Avoid purchasing paper (either virgin or recycled) which uses chlorine in the bleaching process.

Specify recycled paper when commissioning publications.

Always dispose of waste paper that cannot be reused via the "paper recycling bin" for recycling.

Purchase recycled paper

- Reduce/energy use – making pulp paper from recycled waste consumes up to 50% less energy than using trees.
- Reduce pollution – fewer chemical processes are involved in the production of recycled paper than that of virgin paper reducing the polluting effect or any waste released into rivers and seas.
- Reduces waste – by increasing the demand for waste paper for recycling less paper will go to landfill where it releases methane, a greenhouse gas, as it decays.
- Reduces the pressure for more plantations where natural forests still exist – therefore protecting wildlife habitats and local ecology.

- Reduces water use – recycled paper production uses up to 50% less water than the production of paper from new wood pulp.

CLEANING MATERIALS

What are the issues?

Cleaning materials contain:-

- Phosphates in detergents cause damage to water supplies, is responsible for eutrophication; overloading water courses with nutrients leading to algal blooms killing water wildlife.
- HCFC's and CFC's – some cleaning materials are supplied in aerosol form which may use chlorofluorocarbon (CFC) propellants. These have a depleting effect upon the ozone layer, which shields the Earth from damaging ultraviolet rays from the sun. This can cause cancers and crop damage, and contribute to global warming.
- Toilet blocks – may contain Paradichlorobenzene (PDCB) which may have an adverse effect upon aquatic plants and marine life.

Good Practice

Purchase phosphate free detergents.

Purchase HCFC/ CFC free aerosols, avoid aerosols use pump action recycled plastic containers.

Purchase toilet blocks which are PDCB free and biodegradable.

BATTERIES

What are the Issues?

- Batteries require more energy to produce than they actually generate.
- Lead acid batteries – used in vehicles and some power tools, the battery acid and lead salts can cause environmental contamination.
- Cadmium/mercury batteries – used batteries represent a potential for harm to human health and the environment because of the toxic heavy metals, such as cadmium and mercury, that some of them contain. The elements can leak out into the soil when disposed of in landfill sites, or cause air pollution when incinerated.

Good Practice

Avoid buying equipment which requires batteries if at all possible.

Recycle lead acid batteries.

Buy rechargeable batteries – although they contain higher cadmium levels than standard batteries they can be used up to 500 times before disposal.

If you must buy standard batteries choose those which have a reduced mercury level preferably with zero mercury content.

Purchase solar powered calculator/pumps/watches/radios etc.

HORTICULTURAL PRODUCTS

What are the issues?

- Pesticides – contain chemicals which may have a harmful effect on health and the environment. Water-soluble pesticides have the potential to contaminate ground water. Chemically stable, fat-soluble pesticides can spread widely by wind, rain and water movement and their concentration can accumulate to levels that may be toxic to fish and wildlife.
- Herbicides – Herbicides can persist in the soil, prevent germination of seedlings, can be leached from the ground and are frequently detected in water supplies.
- Peat – extraction of peat destroys rare wetland habitats.

- Purchasing products from the continent and beyond contributes to increase in transport use and global warming.

Good Practice

Do not use pesticides or herbicides unless essential.

Avoid products with wood preservatives containing pentachlorophenol (PCP), lindane and tributyl tin oxide (TBTO).

Avoid using residual herbicides. Systematic herbicides which act through contact are preferred for environmental reasons as they break down before they reach water courses.

Use alternatives to peat, including:

- Bark and wood chip – readily available waste products widely used as mulch. Composted bark can be used for soil amelioration and potting compost.
- Animal manure and straw – available as waste products. Excellent growth medium if well composted. Straw improves the texture.
- Leaf mould – mulch and compost. Can be used where readily available and collectable.
- Sewage sludge – good growing medium if it is well composted to remove contamination by metals and pathogens.
- Domestic refuse – composting of domestic organic waste to provide compost also leads to a reduction in landfill and possible energy production from waste digesters.
- Coir (coconut fibre) – this has recently become more widely available and can be used as a growing medium. Its disadvantages are the environmental costs of transportation from countries such as Sri Lanka and India.
- Buy products from local suppliers to reduce transport use and help local businesses.
- Buy products with the minimum of packaging and in containers that are made from recycled materials and recyclable.

VEHICLES AND FUELS

What are the issues?

Petrol and diesel engines produce:

- Air pollution – caused by e.g. carbon dioxide, nitrogen oxides, sulphur oxides, particulate matter, lead. All these pollutants not only lead to environmental damage, such as acid rain and global warming, but can also damage human health e.g. asthma.
- Cars consume enormous amounts of energy in their manufacture and use.
- Car production leads to enormous waste and cars create a problem of e.g. tyres.
- Car use is increasing and with it the land use and habitat destruction from road building and maintenance.

Good Practice

Use the phone.

Video conference.

Send an e-mail.

Reduce your journeys – are they really necessary?

Use public transport, cycle or walk.

If you need to use a car – share it.

Switch to electric or gas vehicles.

Switch to new high efficiency diesel engined vehicles running on fuel containing no lead and using less fuel, with very low particulate matter.

Use remould tyres and dispose of used tyres properly or send for retreading.

TIMBER PRODUCTS

What are the issues?

- Timber and wood products are sustainable – trees lock in carbon dioxide from the atmosphere and help reduce global warming – the CO² remains locked in, until it decomposes.
- Using tropical timber products leads to deforestation loss of wildlife habitats, extinction of species and soil erosion as well as unbalancing the earth's climate!
- Using timber from sustainably managed forests.
- Forestry – some timber comes from carefully managed plantations where new trees are continually being planted, but much timber comes from exploitation of natural forests in North America and Scandinavia, in some cases there are environmental implications e.g. loss of wildlife habitats, replacement of natural forests by plantations, use of pesticides, soil erosion caused by large areas being clear felled.

Good Practice

Do not buy products made from tropical hardwood.

Purchase timber and products from sustainable forests – those which take into account environmental implications. There are labelling schemes for sustainable timber e.g. the Forest Stewardship Scheme. (FSC).

Use reclaimed timber.

When purchasing plywood and chipboard ensure they are manufactured with low formaldehyde resins and without formaldehyde glue, and from sustainably managed forests.

PAINTS

What are the issues?

- Lead is toxic can accumulate in the human body, and can cause serious health problems, including brain damage.
- Raw materials – depletion of finite resources.
- Paint tin disposal – can lead to pollution of water courses and ground water.

Good Practice

Do not use paint that includes lead.

Purchase water-based paints.

Use high quality paints, needing less frequent repainting.

Dispose of paint tins carefully.

COMPUTERS/MACHINES

What are the Issues?

- Energy – their manufacture and use adds to the depletion of the worlds resources and contributes to global warming and acid rain.
- Raw materials – using metal, plastic and glass contribute to depletion of the worlds finite resources.
- Visual display units – can be a health risk if they do not comply with EC regulations.
- Disposal – replacement may be frequent due to new technology and difficulty of upgrading, repairing. Recycling is difficult due to many different components incorporated.

Good Practice

Consider carefully before replacing old model – is the new one really necessary? - Can you upgrade.

Purchase computers/machines which can easily be upgraded, repaired etc. if possible.

Choose models with energy saving devices.

Use recycled toner cartridges and collect used toner cartridges for recycling.

Turn off computers when not in use.

Activate energy saving features on monitors.

Ensure redundant computers are recycled.

Do you need your own computer – can you hot desk?

OFFICE EQUIPMENT AND STATIONERY PRODUCTS

What are the issues?

- Some correction fluids contain Trichlorethane which is an ozone depleting solvent.
- Most marker pens also contain this solvent and may contain Xylene and Toluene which can damage the environment.
- Glues containing solvents can be environmentally damaging, as can products such as photograph/display mounting glues and sprays, some of which contain hydrocarbon propellants.

Good Practice

Rent rather than buy.

Make sure office equipment is made from renewable materials – wood/wool.

Reuse office furniture.

Clear out desks and use old pens/stationery.

Purchase solvent free correction fluids and glues.

Avoid using photograph mounting glues and sprays that contain trichlorethane.

Where no alternative is available avoid overuse of products containing trichlorethane and other damaging solvents.

FOOD

What are the issues?

- Intensive agriculture depends upon extensive uses of pesticides, herbicides and fertilisers. It depends on transporting food over long distances and contributes considerably to global warming.
- Wildlife – intensive farming practices change harvesting regimes, destroy habitats and need large buildings in the countryside.

Good Practice

- Purchase locally farmed produce to reduce transporting food over long distance and also to revive the local economy.
- Purchase organic food grown without pesticides, herbicides or artificial fertilisers.
- Buy animal products that have not been farmed using intensive factory farming methods.
- Buy food packed in returnable boxes using the minimum of packing.
- Buy unprocessed food not convenience foods.

CONSTRUCTION MATERIALS AND ROADWAY PRODUCTS

What are the issues?

- Stone, brick and aggregates – requires the mining and quarrying of substantial tracts of land, sometimes in areas of natural beauty, involving the loss of agricultural land and wildlife habitats as well as problems of traffic generation, dust, depletion of finite resources and interference with the water table.
- Waste disposal – construction and demolition waste contribute to 17% of waste arising in the UK. The majority can not be incinerated and is not biodegradable and therefore has a significant impact in terms of volume in landfill sites.

Good Practice

Specify the use of old construction material e.g. old bricks for hard-core.

Recycle construction waste.

Specify aggregates from secondary sources e.g. colliery waste, pulverised fuel ash, and gypsum from flue gas desulphurisation.

Establish a recycling bank of materials from demolition sites.

PLASTIC PRODUCTS

What are the issues?

- Most plastic products require high levels of energy and the use of non renewable resources.
- Most plastics are difficult to recycle, there are few markets for the recycled plastic material, it is non-biodegradable and causes air pollution when incinerated.
- PVC produces hydrochloric acid when burnt.

Good Practice

Avoid purchasing plastic products made from oil/gas raw materials.

Purchase recycled plastic products, choose those with highest possible recycled content.

Get suppliers of plastic products to take back plastic waste.

Recycle all plastic products.

Avoid PVC products.

Use plastic products made from vegetable oils.

Buy liquids in returnable rather than disposable containers.

A CHECKLIST FOR SUSTAINABLE PURCHASING

- Does the product use fewer polluting by-products than competing products?
Is the product durable and easily, safely, and economically serviced?
Are any components or is the required maintenance, environmentally damaging?
Are all the features of the product necessary?
Is the company producing the product in compliance with all environmental laws and regulations?
-
- Are you aware of any product alternatives that are more environmentally responsible?
-
- Is the product designed to reduce consumption?
Is the product designed to minimise waste?
Is the product reusable?
Is the product technically and economically recyclable?
Do facilities exist to recycle the product?
Are recycling collection systems in place at the point of end use?
Can the product be returned to the supplier at the end of its useful life?
Is the product compostable?
-
- Are recycled materials used in the product?
If so, what percentage?
What percentage of post-consumer materials are used?
-
- Is the product energy efficient?
Can the product be recharged?
Can the product run on renewable fuels?
Does the product reduce water use?
- Does the product require special disposal?
Is the product free of banned substances and heavy metals?
Is the product free of toxic or endangered materials?
Does the product emit volatile organic compounds (VOC's) or other air pollutants?
Does the product require special use instructions for health and safety?
- Can the packaging be eliminated?
Is the packaging designed to be minimal?
Is the product packaged in bulk?
Is the packaging reusable or recyclable?
Are recycled materials used to produce the packaging?
Can the packaging be returned to the supplier?
Is the packaging compostable?
- Has a lifecycle analysis of the environmental burdens associated with the product or packaging been conducted by a certified testing organisation?
- Is the company producing the product, equipped to bid and bill electronically?
- Does the company have an environmental policy statement?
What is the company's history on environmental and safety issues?
Can the company verify all environmental claims?
What waste reduction programs does the company have in place or have planned?
Has the company conducted an environmental or waste audit?
Is the company responsive to information requests from stakeholders?

The preceding questions can be applied when making a wide range of purchasing decisions. To make sure no area is overlooked, consider all aspects of your operations. These may include:-

Paper
Carpeting
Packaging
Furniture and Fixtures
Office equipment and supplies
Water use devices
Photocopying
Batteries
Photo-developing

Vehicles/motor/ oil/tyres/fuels

Printing

De-icing compounds

Cleaning products and devices

Heating and cooling equipment

Grounds maintenance

Windows and doors

Janitorial services

Ventilation systems

Food service equipment and supplies

Employee transportation

Food and beverages

Delivery and distribution systems

Lighting

Transportation services

Paints

Hotel accommodation