



Briefing 11-43 August 2011

## Green Cleaning

This briefing takes an overview of the various 'environmentally friendly' cleaning solutions currently available to building cleaning service providers. Whilst many clients seek green solutions, not all claims can be substantiated.

### Key issues

- Green cleaning can bring financial savings as well as environmental benefits.
- Many leading claims by chemical manufacturers should be treated with caution
- Green cleaning has to be embedded within the service and not just 'bolted on'.

### Overview

Council cleaning services are increasingly adopting environmentally friendly methods of cleaning, spurred by a multitude of factors including a desire to embrace 'green' methods, increasing expectations by clients and the now near standard requirement included within tender documentation to demonstrate environmental credentials. There are a range of options available to the cleaning provider based on a breakdown of the cleaning function, but these can be summarised under:

- Use of chemicals
- Scheduling of staff
- Choice of cleaning equipment
- Provision for waste materials
- Sustainable procurement

### Use of Chemicals

- Cleaning chemicals  
Manufacturers are falling over themselves to proclaim their products to be environmentally friendly. Some even claim remarkably to be 'chemical free'. APSE is unable to substantiate the claims made but as a minimum chemicals should be biodegradable and where practicable, phosphate free. Defra guidance may be found under 'Guidance on 'Biodegradable' and other environmental claims in the Cleaning Products Sector'.
- Dosing systems  
Most commercial cleaning chemicals are delivered in a semi concentrate form requiring mixing with water which is sometimes temperature dependent. Dilution

can be not only hazardous but also dilute concentration can be rather 'hit and miss'. Dosing systems can allow higher chemical concentrations to be used to provide consistent concentrations within re-usable spray bottles. This reduces transport pollution and the requirement for many hundreds of plastic spray dispensers.

- **Electrolytic alternatives**  
Within the last 2 years, a new product has been marketed that removed the need for chemicals as cleaning agents. The handheld Activeion product combines both electrolysis and electroporation to produce a charged water spray which acts as a powerful cleaning agent. The result is a device that cleans up dirt and kills harmful germs with tap water and needs no chemical-related health warning label.
- **Probiotics**  
Bacteria based solutions such as the 'eco-cube' have been developed to reduce the amount of water required for the flushing of urinals. The bacteria break down the odour producing 'bad bacteria' and allow the flushing to be reduced substantially thus saving significant amounts of water.

### **Scheduling of Staff**

- **Daytime cleaning**  
There are numerous opportunities within some administration buildings for daytime cleaning. This negates the need for buildings to remain open later to accommodate cleaning operations – reducing energy use and ultimately costs for heating, lighting etc. This needs to be sensitively managed with building users to ensure no disruption to normal working conditions. The use of battery operated vacuums and other technology would enable this to be facilitated. (see APSE briefing 10-18 for further details)

### **Choice of cleaning equipment**

- **Microfibre**  
Microfibre cloths have becoming a standard for many cleaning applications. As the name suggest the cloths contain massive numbers of smaller fibre threads, far in excess of a traditional cleaning cloths. These trap dirt using a small amount of water as the cleaning agent without the need for detergents.
- **Power consumption/reduction of environmental impact during life phase**  
Vacuum technology has evolved significantly over the last 10 years with the Dyson led cyclone and ball innovations. At the same time motor technology has improved and in combination with better air flow design, power consumption has been reduced. When purchasing equipment the life time running costs should be calculated.
- **Energy consumption**  
Some manufactures have introduced variable speed motors to their vacuums allowing a distinction between 'normal' and 'heavy' cleaning requirements. This has been branded as Autosave technology, but is reliant on the operator to maximise the benefit

- Recycling  
Most cleaning equipment may be maintained without the need for specialist knowledge. It is therefore cost effective to maintain equipment in-house and where practical use redundant and broken machinery for spares thus saving the cost and use of resources to manufacture new ones.

### **Provision for waste materials**

- Recycling  
The installation of pods of bins in administration buildings for plastic, tins, glass and paper allows easy separation and onward recycling. The cleaning team are responsible for the collection of paper and general waste with building users placing their own recycle waste in the appropriate 'pod' with cleaning staff taking it to a central collection point when full, ready for collection.
- Communal bins  
Communal bins in office areas; one for landfill and one for recycling, removes the need for individual bins by desks. This would also impact on the number of black bin bags/liners used – reducing costs to the customer and supporting a more environmentally friendly waste removal through reduced number of bin bags.

### **Sustainable procurement**

- Green tendering  
The method used by a council to procure the goods and services it utilises should support the wider social, economic and environmental objectives of the authority. The long term benefits including energy and resource efficiency, local supply, use of recyclable materials and reduction in pollution should form part of the council's overall sustainable procurement strategy. In many cases, engagement with suppliers is required to ensure that products are re-engineered to fulfil these objectives. (See APSE publication and policy tool 'Towards sustainable procurement' for further support)

### **APSE Comment**

APSE welcomes all attempts by local authorities to improve their approach to reducing the environmental impact of their operations. In many cases this provides benefits in the workplace and a financial saving. Some of the options, such as daytime cleaning, require a challenge to the accepted ways of working, but the benefits to the work environment and the cleaning staff are undeniable.

Too often, short term considerations drive the choice of cleaning equipment and consumables. The most economically advantageous tender should consider the wider benefits and encourage the investment in 'greener' technology.

### **Rob Bailey**

Principal Advisor, APSE