

Internal re-use scheme furnishes cost savings

At Manchester Metropolitan University, non-residential furniture such as desks, chairs and trolleys were already being sent for re-use in line with the waste hierarchy. Following a WRAP review, the university discovered that operating the re-use scheme in house would not only help to follow best practice for waste, but also realise cost savings of £40,500 per year.

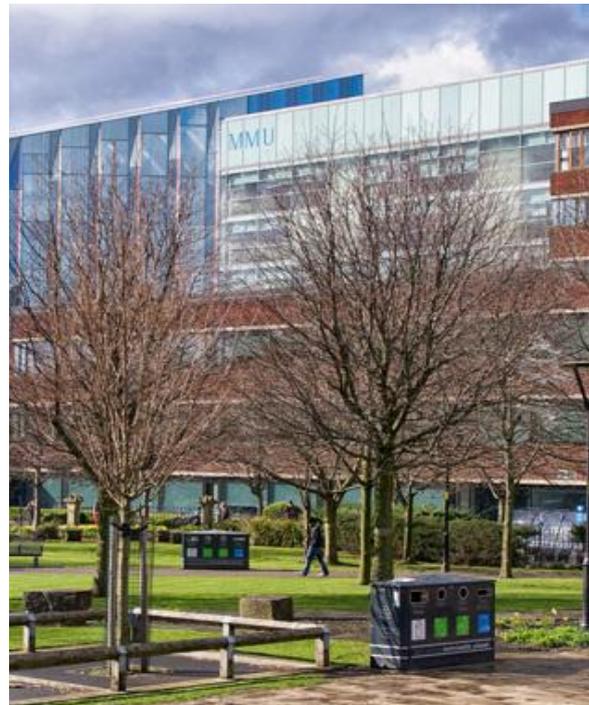
Background

Manchester Metropolitan University is the largest campus-based university in the UK, with a student population of 37,000 based across five campuses. It is currently undergoing a rationalisation process which aims to reduce the number of campuses to two by 2015.

Environmental performance is taken seriously, with planning and reporting achieved through a combination of the university's Sustainability Policy, Annual Sustainability Statement, and Carbon Management Plan.

Waste and Recycling Assistant Mark Miles said the drivers to improved sustainability were two-fold – a desire to lead the way in environmental behaviours and, also, awareness of the link between resource efficiency and a reduction in costs: "If energy costs go up and landfill taxes continue to increase, we hope to mitigate that as well as addressing environmental concerns."

Between 2011 and 2012, the university spent around 37 per cent – £135,000 – of its furniture budget on non-residential office furniture. This procurement activity was necessary to help make the university a suitable place to work and study and included desks and pedestals, metal shelving, drawers and cabinets as well as items such as laboratory equipment and notice boards.



Manchester Metropolitan University serves 37,000 students across five campuses

Although residential furniture is largely re-used on site, non-residential items were being removed for re-use by a third party. Miles explained that the university took up WRAP's offer of support with a view to finding a more effective solution.

"Ultimately, it is better to retain items on site for re-use and not buy new furniture in. You have to consider the negative impact of producing new items, shipping them in, and shipping old ones to somebody else."

Mark Miles,
Waste and Recycling Assistant,
Manchester Metropolitan University



The university spent £135,000 on non-residential office furniture between 2011 and 2012

He added: "In addition, once WRAP had finished the review, we were surprised to see the CO₂e savings and cost savings avoided through re-using and not needing to purchase new furniture. That was a considerable business case in itself; I hadn't expected it to be anywhere near that high."

Current practices

Although non-residential furniture was not being re-used in-house by the university itself, in the last year around 44 tonnes of material was collected for re-use from four of the five campuses. This represented a rise of 65 per cent from the previous year, and one that Miles put down to increased awareness on the part of staff members. As the remaining campus, Crewe, was outside the catchment area of a re-use enterprise, surplus furniture from Crewe was segregated for recycling or waste to energy by the university's main waste management contractor, Veolia Environmental Services.

When staff decide that an item of furniture is surplus to requirements – as often occurs when new facilities are outfitted – or broken, they are required to fill out a 'FIN80' asset disposal form which is then signed off by line managers and the procurement department. The form calls for a range of information, including a description, serial number, location, year of purchase, and proposed method of disposal.

Items with an original purchase price of more than £500 follow a slightly different procedure and must be cross-referenced to the asset register prior to sign off. In these cases, staff also complete an online form asking for the condition and basic description of the item, and the name of the budget holder, who may then be charged for

Key benefits

- Realise £40,500 cost savings
- Reduce carbon impact by 24 tonnes
- Reduce the need for resources required to manufacture and ship new furniture

disposal. Items are then assessed and, where possible, retained on-site for re-use.

Once the item has been collected for re-use, information is recorded on a furniture data collection spreadsheet detailing the items and their estimated weight. The weight data is used by the Higher Education Funding Council for England waste submission and helps to inform the university's internal re-use and recycling performance monitoring.

Internal re-use programme

WRAP explored the options for two alternative re-use options – firstly, implementing an internal re-use programme for non-residential furniture, and secondly, diverting furniture from the general waste stream to third party re-use. It found that both options would result in a pay-back period of one year.

Continuing to use a third party organisation would save the university £2,083 and 38.85 tonnes of CO₂e per annum. However, implementing an on-site re-use option would result in a cost saving of £42,461 per year and CO₂e savings of 24.04 tonnes per annum, with the following additional benefits:

- Diversion of non-residential furniture from the general waste stream, for example at the Crewe site;
- Provide a platform for more specialised items and items procured in small numbers to be put back to use in the university – for example, trolleys and laboratory equipment;
- Stimulate improvement in procurement practices;
- Generate behavioural change and establish a culture of re-use; and,
- Stimulate innovative projects such as the reconfiguration and refurbishment of furniture.

Key actions

- Obtain baseline data
- Present the business case for implementing an internal re-use scheme
- Identify potential storage options
- Work to raise staff awareness
- Implement system for furniture logging to enable re-use

WRAP projections showed that if just 30 per cent of the most frequently arising materials were included within an internal re-use programme, 13 tonnes of furniture would be diverted from landfill and made available to the university for re-use.

Desks are the items most commonly disposed of, yet even miscellaneous items such as fish tanks, dance floor materials, chalkboards, trolleys and laboratory trays could be included. Miscellaneous items make up 28 per cent of non-residential furniture.

Challenges

Perceptions and low levels of awareness often result in barriers to re-use both within the workplace and also domestic schemes. At Manchester Metropolitan University, take up of the re-use scheme had already seen a 65 per cent rise over the course of a year. However, in some instances, such as departmental moves and building refurbishments, there was still a tendency to assume that a new start required new furniture.

Lack of suitable storage was also a barrier, both for furniture which required holding during relocation of buildings, and for surplus items which could be put back into service at a later date. Miles cites storage as the key challenge to be addressed:

"The principal barriers for us are the availability of a centralised storage area and something along the lines of a centralised marketplace where people could view the furniture they needed and which showed them where to go to get it."

Mark Miles,
Waste and Recycling Assistant,
Manchester Metropolitan University

"It may well be something that we can find internally – it is just about the designation of space and whether or not it is seen as a more valuable use of space than other alternatives. Hopefully the report will help us demonstrate the potential gains from having a dedicated furniture re-use facility."

WRAP suggested that if any new furniture procured were specified to a standardised design, putting it back into use in a different environment would be more feasible. The review also highlighted the fact that the log for furniture disposal contained limited information on the quality of furniture already being sent for re-use. While some commentaries described furniture as broken, soiled or damaged, only 11 items from a list of 84 received any comment. The remaining 73 were described as potentially unusable, yet still sent for re-use.

A typical breakdown from a 25-metre vanload of non-residential furniture suggests that approximately 50 per cent is immediately re-useable, just 25 per cent requires refurbishing, and approximately eight per cent will be disposed of as unusable.

Future plans

In the short term, the university aims to introduce waste compaction on site, in order to reduce the number of vehicles visiting the site, while simultaneously reducing collection costs and emissions. Initially, this will apply to general waste and Miles expects waste collections to be cut from around 1,000 bin lifts per year to just four compactor lifts a month.

He added: "We would also really like to operate an internal furniture re-use scheme,



Filing cabinets waiting to be collected for re-use

vehicles coming to and from site, as well as

the effect of actually producing the initial furniture.

“The WRAP work has given us the financial and environmental basis for putting in a re-use scheme. It basically shows what you can save weight-wise, carbon-wise and cost-wise, as well as providing the payback period as well.”



Re-use of just 30% of furniture items would divert 13 tonnes of waste from landfill

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