

A greener library: The Bodleian's push for sustainability

Sarah Lockwood, Bodleian Libraries' Head of Support Services, tells CILIP reporter **Rob Mackinlay** how environmental concerns are driving forward a sustainability journey with ambitious targets, and gives some tips for other library and heritage organisations looking at ways to make their own changes.

HOW do we start behaving as if our planet is in the middle of a climate crisis/emergency/apocalypse?

There are small starts and big ones. As well as looking at some of the easy wins on the sustainability agenda, this article also explores the cutting edge of library sustainability, with the focus on library buildings, their resources and users. Whilst being sympathetic to and protecting the content and collections of our libraries the advice comes from a different profession.

Sarah, who has been in facilities management for over 10 years, working as Facilities Manager at the Royal Albert Hall and the Royal Botanic Gardens, Kew before moving to Bodleian Libraries, said: "These roles that support a building and its operation can sometimes feel a bit thankless, but we have the privilege of knowing our efforts help to preserve amazing collections for access and use, as well as protecting wonderful buildings. There is a genuine pride in knowing that your team is essential to the ongoing operation and preservation of the building and its contents."

Top and bottom

Sarah describes the sustainability agenda as a 'fundamental guiding principle' that is key for any Facilities Manager. At the University of Oxford the aim is clear: "We launched a new ambitious carbon target in June last year, we are committed to reducing emissions by 50



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per cent by 2030 (<https://bit.ly/2VoC25K>), however, we haven't stopped there, we are in consultation to see if we can be even more ambitious in our aims."

And having chaired sustainability committees and worked with many organisations she believes the Bodleian Libraries and the University of Oxford have an effective approach: working both a top-down green strategy – which is not uncommon – but also a more formalised bottom-up movement through a Green Impact scheme (<https://sustainability.admin.ox.ac.uk/green-impact>). This encourages non-facilities staff to create groups and spend time thinking about resource and behaviour efficiency in their buildings. She says the tips that come out of these groups can spill into different areas of life – both profes-

Sarah Lockwood.

sional and personal. “Because of it I have made some changes in practices both in the workplace and home,” Sarah says, “which means I am also learning ways in which I can reduce my personal carbon footprint.”

Local info

The success of sustainability projects will depend on buy-in from users and owners of particular spaces. Sarah said: “It is often the local users of spaces that can best inform of what may or may not work. Or they may flag issues or improvements that they spot as they know particular sections of their buildings in more detail.”

These are centralised and prioritised by the facilities teams and Sarah says: “Sustainability runs as an undercurrent within the department which has a budget for funding or part-funding projects. Because of this we are able to put a business case to our senior management team for local initiatives.”

Working in partnership with the central University of Oxford Estates and Sustainability team, the work of the Bodleian Libraries Facilities team includes:

- Looking for a more sustainable alternative when replacing faulty or end of life equipment.
- Improving processes and procedures and ordering with an emphasis on reusable or recyclable products.
- Trying to stop unnecessary use of plant and equipment whilst ensuring conditions are still met with the roll out of sensor lights, push taps and reducing fan speeds for air handling units.
- Working to the university’s new sustainability design guide as part of our future building plans: <https://bit.ly/2Tkt9Yv>

Easy wins: facilities

But for libraries at an earlier stage in the sustainability process, there are many lessons to be learned and ideas to be shared. Sarah directs some at facilities professionals, and others at librarians.

She said: “For a Facilities team within a library I would recommend they review energy consumption around lighting, water consumption and ventilation systems, reviewing and revising building management systems – looking at periods of time when they can be switched off or run at a lower setting. We had a plant that was running 24/7 which we now turn off at night, almost halving its running time.”

Trials showed that environmental conditions were stable overnight and changes in temperature and humidity were caused by people entering the spaces. The end result saw financial and environmental savings with no negative side.

Examples of facilities-led sustainability projects include:

- Moving to LED lighting in many areas – This is an easy, quick win for many buildings, as although LED lighting is more expensive, the bulbs last a lot longer and so the long-term maintenance costs are also less. This change also results in a significant reduction in energy use from the moment of installation, making the project payback periods very attractive.
- Reviewing plant use across the buildings and look to reduce ‘on’ times or fan speeds. Check to see if the air handling units be turned off for eight to 12 hour periods
- Turning off humidifiers seasonally, therefore achieving savings as they are now only used six months of the year.

Easy wins: library staff

“Facilities are one of the biggest cost areas to many organisations,” Sarah says, “but the workforce can make individual changes which all add up. It is often the people working in local areas around their buildings that know those spaces well. It is





Duke Humfrey's Library. Photo © Greg Smolonski

our librarians that may spot things and can suggest improvements for how the buildings are run – for instance, could sensor lighting be put into little-used places where the lights stay on for much of the day, or could push taps be suggested for toilets, particularly where the public use them. Are the radiators on but the windows open? It will be our key staff working in these areas that can spot things and help us manage our buildings better.”

She says that “Bodleian Librarians and support staff also support these sustainability initiatives as we are closely maintaining the buildings in a way that aligns to the care of their book collections”.

She points out that if savings are made it could make funds available for the collection itself. Another plus side is that the subject itself provokes valuable communication: “Sustainability is a growing agenda item for many, and so we find people want to engage and be educated and encouraged to reduce their carbon footprint, both at work and elsewhere. This is also good for staff engagement as library staff can engage with other colleagues and teams by being a part of a Green impact group improving communication and cross team working. At one of our sites a vegetable planter and bug hotel has been built by the local Green Impact team, helping to educate and introduce these staff to the benefits of growing your own, as well as providing them with the opportunity to socialise with different teams.”

So Sarah's top tip for librarians is to start up a Green Impact team and let team members identify wasteful practices and ways to improve them. The Bodleian Libraries has several Green Impact groups across its various library buildings. Groups tend to meet monthly for one hour and set actions for each month. These are some of the improvements these groups have led on:



Blackwell Hall in the Weston Library.



Weston Library. Photo © John Cairns

- Switch off / Green electronics campaign
 - Publicising sustainable computer, photocopier and printer settings
 - Turning off lights and electronic equipment at night
 - Moving to recycled paper
 - Making sure your printers are set to duplex, black & white by default
- Encourage Reduce, Reuse and Recycle
 - Are you using single-use items? Plastic/paper cups at water fountains can be swapped out for washable cups
 - Do staff know what can go in the recycling? You can create clear signage (often available as printable pdfs through your recycling contractor)
 - Do staff bring in reusable water bottles or coffee cups? Why not see if you can get funding to have branded keep cups
- Promote sustainable travel
 - Most organisations have interest free loan schemes for bikes or sustainable travel
 - Walk or ride to work – national schemes help change habits and create healthier work force, which often improve attendance

Sarah's ongoing projects include monitoring usage in their fleet of vehicles to scope out the possibility of moving to electric power. There is also the creation of a sustainable meeting check-list and guide.

But the options aren't just about work initiatives; one of the Bodleian Green Impact groups has led the development of a 'SWISH table' which gives employees a place to swap clothes, toys or children's books and other general items in good, clean and reusable condition.

High end

At the other end of the scale the Bodleian Libraries has its cutting-edge book storage facility in Swindon. “We are a legal deposit library, so we receive a copy of each book published in the UK – approximately 15,680 books a month. To enable this we have a book storage facility in Swindon which can house up to 13 million books – we are at 10.5 million at the moment.”

Readers don't access the building, they request books and vans deliver to libraries around Oxford twice a day. There is also a scanning service on site so an article or chapter can be sent to readers electronically for a small fee.

Sarah points out: “This is not a library building but a book storage facility so



Weston Library. Photo © John Cairns



KeepCup.



Osney Building's bug hotel.



Radcliffe Camera (interior). Photo © John Cairns

we were able to go a lot further with energy saving – the space is generally quite dark and we only light the rows where the books are being collected from. We are also able to keep the temperature at a lower level, which is ideal for book preservation, but not conducive to desk working.”

The results since 2011 are impressive:

- Electricity usage down by 68 per cent
- Gas usage down by 36 per cent
- An overall reduction of 1.4 million kWhs in energy usage
- Utilities savings of £113,000 over two years (2019 vs 2011)
- Annual carbon usage reduced by 591 tonnes of carbon over eight years (2019 vs 2011), supporting the University's objective of reducing carbon usage

Many of the changes implemented have been made incrementally. For example changes to the environmental control system involved capping the speed of the air handling system fans, broadening some parameters to allow minor environmental drift, and programming the two chillers to run alternatively rather than simultaneously. All the changes were implemented

one at a time and initially as a trial. Together this work achieved a 36 per cent reduction in energy usage.

Old buildings

The Bodleian Libraries estate includes buildings of all ages. Sarah says new buildings are easier overall – they are usually designed to be more sustainable from the start and can be adapted more

easily. Sarah said: “For instance, in a new building you can reduce the water used in a toilet flush since most new toilets now have two options when flushing. However, for older buildings this often isn't an easy solution as the building is linked to much older waste pipework which is much smaller. In such buildings we need more water to stop blockages and waste backing up.”

With many Grade I or Grade II listed buildings in the estate, Sarah has a responsibility to protect and be sympathetic to their original designs. A recent project looked to install removable secondary glazing panel that keeps heritage features visible and accessible, whilst also introducing the carbon benefits of not having to heat a space as much during the colder months. But old building do have benefits: “We have some very thick walls around our buildings, which help in maintaining temperature all year round.”

Trials are now running on their air handling units and Sarah says: “We are confident that the payback will significantly reduce utility bills, but we are having to do this roll-out slowly to ensure the right conditions for our book collections are maintained. The Bodleian Facilities team are wonderfully supported in this project by the University Sustainability Engineers and the Libraries Collections Care team.” **IP**



Radcliffe Camera. Photo © University of Oxford