

‘Hidden risks’ in legacy buildings

Andrew Steel, managing director of air hygiene and water treatment specialist, Airmec, considers some of the key priorities for estates and facilities teams managing older healthcare estates to ensure that both the buildings, and the plant and equipment within them, are maintained in a safe, fit-for-purpose condition. He stresses the need both for accurate and proper risk assessment – particularly when ‘legacy’ buildings have been regularly adapted, updated, or refurbished over time, and, equally, to maintain up-to-date and comprehensive asset registers.

Facilities management is part of PFI agreements, with a new PFI-funded hospital’s Trust typically using the PFI facilities management company for all the buildings and grounds maintenance. The Trust may also indeed be bound to use the PFI non-clinical services company for services such as cleaning, catering, laundry and linen, car parking, security, switchboard services, and portering.

The lowest bidder will almost inevitably have won the PFI contract, and, for the provider to make it work, this means that FM services must be planned and delivered efficiently and cost-effectively. You do not need to dig too deeply in the news to find examples of failures in hotel and cleaning services. Shortfalls in delivering essential air and water services are thankfully rare, but again, delivering safe facilities to budget in these areas is certainly helped by having brand new infrastructure and, presumably, access to accurate records of every fixture and fitting – the reliable schematic asset register that is so often missing in older buildings.

‘Black holes’ in records

In contrast, older buildings still being used for outpatient services or by partnership Trusts are likely to have a legacy of historical ‘black holes’ in the records, and the PFI provider’s facilities management arms often decline to bid for contracts to deliver services in them. It is not just a simple case of cherry picking: their processes and infrastructure are simply not geared to these jobs. Authorising Engineers and Designated Persons within Trusts’ estates and facilities management teams may find little understanding at board



An accurate record of ventilation systems and locations of fire dampers is essential.

level of the complexity, workload, and the costs, involved in keeping older premises safe.

Take *Legionella* – for many healthcare estates and facilities managers a very major focus, and indeed fear. While newer buildings may have the advantage of zoned water systems and built-in flushing valves, systems in older buildings are often mysteries even to the people who manage them. There will be a history of refurbishments and minor works such that nobody really knows the system intimately, or could locate every pipe, outlet, and potential risk area. More worryingly, equipment may be found to be unfit for purpose or obsolete, making repairs and maintenance difficult. Authorising Engineers will already have this on their agenda, but Trusts may not be prepared for the financial implications.

‘A world apart’

A typical example similar to real-life situations we have experienced would be some 1,000 TMVs in an older building that is almost next door to the brand new general hospital with its enviable facilities, but a world apart. It has the legacy that typically comes from decades of organic change in the use of different parts of the building. In such an example, a large proportion of the TMVs (thermostatic mixing valves) may be either so old that no one knows their make or part number or, if they can be identified, the service kits cost three times their modern value. In the medium to long term, it can be cheaper to replace such components even if they are still working. Servicing intervals and procedures for TMVs are well documented, and ultimately carry the regulatory requirements of ACOP L8 and

HTM 04-01. A rolling programme of replacement will eventually deliver savings, but replacements are heavily loaded with upfront costs to cover the capital cost and the essential regime of pre- and post-commission testing. It is often a hard sell stakeholders.

Adding to the facilities management team's workload is debate about where responsibility for these older properties lies. For instance, what if a mental health partnership Trust is using a building being leased to it by the acute hospital Trust? For me the answer is simple: the buck stops with the people delivering the care. Simply doing the minimum towards compliance will not suffice, and will certainly not manage the risk. For a Trust's estates and facilities team, a few outbuildings can prove more time-consuming than the PFI hospital that is its 'jewel in the crown'.

Implementing a remediation strategy

If there are infrastructure issues that cannot be addressed by inspection and cleaning, they need to be identified, a remediation strategy put in place, and a budget negotiated. The work involved in specifying and replacing the best part of 1,000 TMVs, for instance, is almost certainly not in a healthcare provider client's original plans when it begins delivering outpatient health services from the building; the organisation had originally expected tenders for operational servicing, not advice for capital replacements.

This is hopefully an extreme example, and the buildings usually have a long enough foreseeable working life to justify the costs. There may be older buildings that are effectively in run-off as Trusts



Unless in regular use, water outlets can present a significant infection control risk for healthcare estates teams.

optimise the way services are delivered. They may be converted to flats long before the useful life of any new equipment that was to be installed would have delivered a return-on-investment or passed its useful lifespan. So, there is a clear incentive to avoid capital expenditure, and managing such facilities needs special care, planning, and realistic costing.

No 'slack' in HTMs

Health Technical Memoranda, of course, cut no slack. The way to avoid emergency remedial work via good management comes down to the usual mantra: a

schematic asset register is the foundation of good risk management and auditing. It is, after all, a legal requirement to have it, and it means that investigative trace-and-access work is completed and documented ahead of any emergency or positive test result. Such compliance would, for example, enable water treatment professionals to confirm the cause of a *Legionella* or *Pseudomonas* outbreak, and where it might have spread to, more quickly and cost-effectively.

Positive danger

It has been our experience that older buildings do return a higher proportion of *Legionella*-positive results, a trend that can quickly be reversed when the infrastructure and prevention regime is reviewed. While the buildings may be used for outpatient clinics, the outcome will still mean both major disruption and significant expenditure. Another common Achilles heel is hidden – literally – in hospital ventilation systems. There are rarely enough inspection hatches, just about every different type of fire damper will have been installed at some stage over the years, and it is extremely doubtful that there will be a central record.

Indeed, while *Legionella* grabs the headlines, ventilation systems are also a key concern in older buildings. While there may not be a need, in many areas, to meet the specific ventilation requirements applicable in treatment areas and operating theatres, ageing ventilation equipment could prove a major headache. There does not necessarily need to be a particular incident; simply failing to keep the right inspection and maintenance records can set alarm bells ringing, trigger emergency measures, and even see potentially costly closures.



Older buildings, often used for outpatients' clinics, present the same business risks as newer, flagship buildings. Closure or interruption can compromise the Trust's ability to keep treatment paths on schedule and meet referral targets.

Dangers of shutting down facilities

Shutting down operational areas of a building is a major logistical exercise, and expensive in itself, before one factors in the cost of remedial work. The recent junior doctors' strikes have been a sobering reminder of how treatment paths fall down like a row of dominoes if appointments are missed, and the IT systems simply are not able to re-shuffle them and get every patient back on track.

While, for example, a *Legionella*-positive result does not always necessitate a shutdown, there is never going to be much time for delay; and institutional checks and balances make it difficult to authorise significant expenditure sufficiently quickly, especially if the buildings involved have not been kept front of mind. There may simply be no time for competitive tendering or normal due process. It is the finance director's nightmare – especially if there are still questions about where the responsibility lies – 'landlord' or 'tenant'. Better financial and legal minds than mine are unravelling this, but I still have no doubt that it is the organisation delivering the healthcare services that has the immediate responsibility to act. Who pays further down the line is another matter.

Schematic and asset register

A good head start on remediation is having the schematic and asset register in place, and indeed I would urge any organisation operating in older premises to challenge its estates manager on the accuracy of the existing register or registers. Even where risk assessments are thought to be in place, their inadequacy can be quite surprising, and that, in turn, can often be traced to lack of understanding of the assets and infrastructure. Yet it is a key requirement of HTM and other guidance – which has *de facto* legal status – that risk assessments be carried out by competent persons, so it is even more surprising that good risk assessments are nowhere near ubiquitous.

The requirement for detailed schematics,



Understanding the risk starts with updating the asset register.

and other requirements for risk assessment, are laid out quite clearly in the Health and Safety Executive's (HSE) Approved Code of Practice and Guidance (ACOP). *Legionnaires' disease: The control of legionella bacteria in water systems (L8)*. For healthcare estates teams, there is an additional requirement to adhere to the relevant Health Technical Memorandum, the recently published 'new' HTM 04-01, *Safe Water in Healthcare Premises (2016)*. It goes beyond the requirements of ACOP L8 in a number of areas. One example is the treatment of water outlets that are not in regular use, which are likely to be more prevalent in older buildings that have seen many changes in use over the years.

Best practice

British Standard BS 8580:2010, *Water quality. Risk assessments for Legionella control – Code of practice*, clearly lays out

the best practice for risk assessments, but takes the form of guidance and recommendations rather than being a definitive specification. It is down to the healthcare provider, and its chosen advisers, to get it right. There cannot be comprehensive assessment of the risks if there is no comprehensive asset register to identify potential problems. This is especially important with so many Trusts now preferring to manage routine work internally. It is a logical approach that offers significant cost savings, but these will quickly be wiped out if the regime fails to address the risks and there is an outbreak. Yes, it may uncover the need for unexpected works; more often than not, however, grasping the nettle and commissioning a survey avoids them. Above all, it avoids the biggest expense of all – that of dealing with emergency remediation. +

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