

Built Environment Journal

Editor's choice

MARCH 2022 –
MAY 2022

RICS JOURNALS

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(March 2022 – May 2022)

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Fire safety failings incur record fine

BUILT ENVIRONMENT JOURNAL
First published 24 March 2022



BUPA has been ordered to pay more than £1m after failure to comply with fire safety duties led to the death of a south London care home resident

By Gary Strong

UK private healthcare provider BUPA has been fined a record £1.04m after a resident died in a fire while smoking at one of its care homes.

BUPA Care Services (ANS) Ltd was fined £937,500 for fire safety failings and ordered to pay £104,000 prosecution costs at Southwark Crown Court on 5 January.

BUPA prosecuted by fire brigade

The London Fire Brigade (LFB) brought the prosecution against BUPA under the *Regulatory Reform (Fire Safety) Order 2005*, after it had been called to the blaze at the Manley Court care home in Brockley, south London, in March 2016.

Cedric Skyers, a 69-year-old wheelchair user and resident of the home, died in a fire while smoking unsupervised in a shelter in the garden. A care assistant saw the fire from a first-floor window and called 999 before staff attempted to extinguish the blaze. However, Mr Skyers sadly died from his injuries.

A subsequent investigation found that although a smoking risk assessment had been carried out for Mr Skyers, it did not assess his use of emollient creams, which can be flammable if allowed to build up on skin, clothes or bedding.

Apparent burn marks indicating previous incidents were also found on his clothing after his death; something care home staff claimed they had been unaware of. They said that, if they had known, they would have ensured more regular checks were made when he was smoking.

Failure to comply with fire safety duties

LFB brought the case as the home's failure to comply with fire safety duties had placed Mr Skyers and other residents at risk of death or serious injury in case of fire.

BUPA pleaded guilty to contravening article 11(1) of the 2005 Order, which relates to the management of fire safety arrangements.

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Specifically, the company accepted that it had failed to:

- ensure staff understood the risks from the use of emollient creams
- warn residents using paraffin-based products not to smoke, or require them to take precautions such as the use of smock or apron
- instruct staff not to leave a resident smoking unsupervised if that resident was using paraffin-based products
- carry out an individual smoking risk assessment of the residents as normal, with the control measures in place.

LFB assistant commissioner for fire safety Paul Jennings said: 'This case is an absolutely tragic example of the devastating consequences of failure to comply with fire safety regulations.'

'If anything constructive can come from this, we hope it will be that anyone who has a legal responsibility for fire safety in a building – whether it's a landlord, a property manager, provider of a care home or any other setting – takes note and makes sure they are complying with the law.'

This is another tragic yet avoidable fatality. We urge designated responsible persons and others involved in the management and running of buildings to take their duties seriously.

People in care homes should expect the very best of care, and we hope that wider public awareness of this case will help prevent further tragedies.

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Related competencies include:
Fire safety
Legal/regulatory compliance

Is the Party Wall Act now obsolete?

BUILT ENVIRONMENT JOURNAL
First published 28 April 2022



Comment: A recent High Court decision confirmed that the Party Wall etc. Act 1996 does not apply in the absence of a notice. Will this create a rogue's charter?

By James McAllister FRICS
James Holton and Philip Byrne

Many party wall surveyors and legal practitioners have traditionally considered that the dispute resolution mechanism in the Party Wall etc. Act 1996 operates as long as there is a dispute between two property owners relating to applicable building work – and more so where damage has arisen.

The rationale for this is the absence of any express terms in the wording of the act about service of notice as a prerequisite for the operation of its provisions and, importantly, the appointment of surveyors. In this respect it is unlike its statutory predecessor, the **London Building Acts (Amendment) Act 1939**.

Shah v Power and Kyson [2022] EWHC 209 (QB) has put the matter beyond doubt. In this recent case, a building owner carried out notifiable works without serving a notice on the adjoining owner in accordance with the 1996 Act.

The works in question caused damage to the adjoining owner's property, so the adjoining owner appointed a party wall surveyor, Kyson, to resolve matters. The building owner was invited to appoint a surveyor but declined. Kyson therefore appointed a surveyor, Power, for him, purportedly under section 10(4)(b) of the 1996 Act. The two surveyors then made an award dealing with compensation and their fees.

The act's provisions do not apply without notice

The building owner appealed the award, which was held by the county court to be void. The surveyors then appealed that decision in the High Court. The High Court dismissed the appeal and upheld the decision of the county court on the grounds of no notice, no act. That is, the provisions of the act are not invoked where notice has not been served. This naturally precludes the appointment of surveyors, as the act's dispute resolution scheme is also unavailable where the legislation itself has not been invoked.

The decision has also reminded surveyors that they do not have jurisdiction to make awards dealing with common law matters, as established in *Reeves v Blake* [2009] EWCA Civ 611. Common law will apply where the act has not been brought in to play.

Shah runs the risk of becoming a rogue's charter. If a building owner does not wish to be troubled by the service of notice and the cost or delay of involving surveyors, why not ignore the act altogether?

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Party walls in case law

By Andrew Thompson and
Michael Cooper



Party walls and the public

By Michael Cooper and
Andrew Thompson

Unnotified works vulnerable to legal action

Although the Shah decision could leave unnotified adjoining owners at risk, they are not without legal recourse.

In the first instance, a building owner who proceeds with notifiable works but does not serve notice will lose the benefit of the legislation, including rights of access to perform works in pursuance of the act. They will also run the risk of exposure to a claim under the common law.

The common law causes of action open to an adjoining owner include claims under the torts of nuisance, trespass and breach of statutory duty – that is, for failure to serve a notice in the first place – although the latter remains an area of unsettled law. A claim for negligence might also be brought in some situations, such as where works are carried out carelessly.

It is important to note that the act permits certain works that would ordinarily amount to a trespass, such as the projection of foundations over the legal boundary and access over the adjoining owner's property. Where the act applies, access over an adjoining owner's property to perform the works is also available, even where the adjoining owner has not given permission.

The act also permits what would otherwise amount to a nuisance, such as cutting away parts of the adjoining owner's property to accommodate the building owner's works. Clearly, these rights cannot be enjoyed by a building owner who fails to comply with the act, leaving the adjoining owner to bring the appropriate claim.

Where works are imminent – or have already commenced – the most attractive remedy for an adjoining owner will often be to apply for an injunction to restrain the building owner. The court may grant an injunction to prohibit the works where the adjoining owner can demonstrate that these threaten to adversely affect their rights.

Although the Shah decision could leave unnotified adjoining owners at risk, they are not without legal recourse.

However, the adjoining owner will need to act quickly. An injunction is a discretionary remedy, and the court will consider the promptness of any application before granting relief.

In light of the Shah decision, some building owners might now be tempted to start notifiable works without serving notice on the adjoining owner, in the hope the latter won't have the inclination or resources to take legal action to protect their rights. However, the outcome for an errant building owner could be an injunction preventing the completion of the works, or an order for damages and an order to pay the adjoining owner's legal costs.

Such a risk should persuade the wary building owner to consider their position carefully, particularly on complex projects where the inevitable delay caused by legal proceedings will increase costs. After all, the act was drafted for the purpose of keeping such neighbourly disputes out of court.

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Why surveyors must secure sites after visits

BUILT ENVIRONMENT JOURNAL
First published 5 May 2022



Comment: If a surveyor fails to secure a site properly during or after a visit, they may face significant liabilities in tort for any damage arising from their oversight

By David Greenwood

Question: I am a building surveyor, working on a commercial project and acting for the company that intends to lease a few floors of the building. As I was familiar with the site, the building owner allowed me to borrow his keys so I could visit on my own and double-check something.

After completing my inspection I locked up again, returned the keys to the owner and completed my report for my client.

I received a call from the building owner a few days later informing me that I must not have adequately resecured the site while I was inside, as vandals had managed to gain entry and cause significant damage after I had left.

Can the building owner sue me for his losses?

Answer: The risk posed by vandalism is not new and site security remains an important consideration. From the question, it is apparent that the surveyor ought to have been more careful when attending site, to ensure it was secure during and after their visit.

The current edition of [Surveying safely: health and safety principles for property professionals](#), RICS guidance note, would have helped the surveyor here.

For example, section 6 provides guidance on site visits, including pre-visit checklists.

This might have helped the surveyor to have identified and eradicated the risk before their visit. Subsection 6.4 includes a reminder to secure the site after attendance, while 6.5 recommends they complete a review after their visit.

Having failed to follow best practice on health and safety, the surveyor's main question is whether this will leave them exposed to a liability for the damage caused by the vandals. As there is no contract between the surveyor and the building owner there can be no contractual claim, only a potential claim in tort.

Distinct from any contractual or statutory obligations, tort imposes a civil liability for breach of legal obligations. The most common tort is the tort of negligence. This imposes an obligation not to breach a duty of care that the law says is owed to those who may foreseeably be injured – physically or financially – by particular conduct.

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Case stresses landlords' fire liability

By David Greenwood

Professional found liable on appeal in similar circumstances

The extent or otherwise of a consultant's tortious liability in these circumstances came into focus in a recent case based on very similar facts, albeit against an architect rather than a surveyor.

In [Rushbond Plc v The JS Design Partnership LLP \[2021\] EWCA Civ 1989](#), the Court of Appeal overturned a first-instance decision to strike out a property owner's claim against an architect.

The marketing agents for a large, disused cinema in the centre of Leeds allowed a potential purchaser's architect to inspect the property. The architect attended unaccompanied, turned off the alarm, and entered by a side door that he shut behind him but did not lock.

After spending about an hour inside the property he left, relocking the door and reactivating the alarm. However, some vandals had gained access while the door was unlocked and hid inside the property while the architect was carrying out his inspection, later starting a fire that caused substantial damage to the interior and the roof of the building.

The owner sued the architect for £6.5m, alleging negligence. The claim was in tort, as the owner had no contract with the architect. The architect applied to have the claim struck out and the High Court sided with him, holding that his wrongdoing was a 'pure omission'. In other words, he did not start the fire, causing or permitting the harm, he simply omitted to lock the door. The general position is that the law does not impose liability for 'pure omissions'.

However, the Court of Appeal disagreed, finding it 'arguable' – which is the test when determining whether or not to strike out a claim – that this is not a case of 'pure omissions'. In any event, this is a case that fits within a line of authority which potentially renders the architect liable for the consequences of their failure to take reasonable steps to ensure that the property was properly protected during the visit.

One of the Court of Appeal judges, Lord Justice Coulson held that:

- As a matter of general principle, it was 'fanciful to suggest that, whilst the sole occupant of the property, trusted with the keys, the respondent owed no duty of care to the claimant to take reasonable precautions as to security'.
- Arguably, this was not a 'pure omissions' case. The architect was 'involved directly in the activity which allowed the intruder to enter the property'. The exclusion of liability for 'pure omissions' did not cover cases where a failure to do one thing - i.e. lock the door - was part of a wider activity that gave rise to the loss.
- This case fitted within a line of authority concerning the duty to take reasonable steps to keep a property secure (*Stansbie v Troman* [1948] 2KB 48).

Lord Justice Coulson also suggested that, if a full trial revealed that this was indeed a 'pure omissions' case, the trial judge might find that an exception to the rule applied, either because the architect had created the danger or because he had assumed responsibility. In doing so, Lord Justice Coulson disagreed with the high court judge's view that this required the architect to have held itself out as having some special skill or expertise in safeguarding property. Locking a door did not require any specialist skill.


It seems that it is arguable that the surveyor owed a duty of care to the building owner to take reasonable precautions as to security

Applying this Court of Appeal’s decision to the scenario and question at hand, it seems that it is arguable that the surveyor owed a duty of care to the building owner to take reasonable precautions as to security and, in failing to properly secure the building during his/her site visit, the surveyor may ultimately be found liable in tort for the losses incurred as a result.

Whether or not the consultant is adjudged to have taken reasonable steps to secure the building will turn on the facts of each case but clearly having robust processes in place – as recommended in the RICS health and safety guidance – is likely to help a surveyor, in these unfortunate circumstances, to show that it did not breach its duty of care despite having a role in the events that led to the damage.

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Late changes proposed to Building Safety Act

BUILT ENVIRONMENT JOURNAL
First published 12 April 2022



As the Building Safety Bill approaches the final stages of its parliamentary progress, the government is proposing some significant revisions to ease the burden of liability on leaseholders

By Alexandra Anderson and
Charles Underwood

The UK government has recently proposed new amendments to the Building Safety Bill, which were discussed and largely approved by the Lords on 4 April.

New power allows service of remediation orders

Among these amendments, the bill contains provisions to make remediation orders, or remediation contribution orders.

These orders may be issued by the First-tier Tribunal on application of interested parties, which can include the Health and Safety Executive (HSE), local authorities, fire and rescue authorities, people with legal or equitable interests in the relevant buildings, or prescribed persons.

Orders would be served on landlords and associated bodies – such as managing agents – to remedy relevant defects in a relevant building, for whose repair and maintenance they are responsible. Under this provision, a relevant building means a self-contained property, or part of it, containing at least two dwellings, which is at least 11m in height and has at least five storeys.

Relevant defects meanwhile are classified as anything done, or not done, or anything used, or not used, in connection with the construction or conversion of a relevant building that causes a building safety risk. The works in question must have been completed within 30 years of the commencement of this provision.

Manufacturers face liability for faulty construction products

Under the latest amendments, the secretary of state would be able to make cost contribution orders against construction product companies.

Such orders could be made against economic operators, a term which covers manufacturers, authorised representatives, importers and distributors. They would be forced to contribute towards the cost of remediation works when the use of their products has caused or contributed to dwellings being unfit for habitation.

The secretary of state would be able to issue a cost contribution order after the successful prosecution of an economic operator for non-compliance with the **Construction Products Regulation**.

A proposed schedule to the bill contains protections for leaseholders relating to certain remediation costs, and imposes corresponding liabilities on landlords of relevant buildings

An independent person will be appointed by the secretary of state to inspect a residential building where the offending product has been used. That person will determine whether the building is unfit for habitation, and the degree to which this is a result of the product being used. They will also consider the necessary remediation works, their cost, and the amount that the economic operator should contribute.

Additional clauses have also been proposed, which would introduce a legal mechanism allowing claims for compensation against manufacturers of defective or mis-sold construction products. The proposal would enable anyone with a legal or equitable interest in a dwelling to bring a civil claim against a manufacturer or sellers who are directly responsible for a product used in the original construction that causes or contributes to the dwelling being unfit for habitation. The cause of action will apply retrospectively.

Schedule apportions responsibility for remediation costs

A proposed schedule to the bill contains protections for leaseholders relating to certain remediation costs, and imposes corresponding liabilities on landlords of relevant buildings.

This schedule would ensure that a tenant under a qualifying lease would not be required to pay a service charge for remediating a relevant defect where the landlord or associated person is responsible for that defect. No service charge would be payable under a qualifying lease in respect of cladding remediation, or for legal or professional services relating to liability for relevant defects.

Additional clauses have also been proposed, which would introduce a legal mechanism allowing claims for compensation against manufacturers of defective or mis-sold construction products.

The most recent government proposals also amend the definition of qualifying lease to provide greater protection for leaseholders. It is defined as a long lease, for a term of 21 years or more, on a single dwelling in a relevant building, where the tenant is liable to pay a service charge.

The proposed schedule would cap the amounts that can be charged to leaseholders where landlords do not have the means to pay for any remaining non-cladding defects. But there is a divergence between the proposal of a fixed cap of £15,000 for Greater London and £10,000 elsewhere – as iterated in a [recent factsheet](#) – and the current wording of the bill, which has a cap of zero.

If the qualifying lease is at least £1m in value but does not exceed £2m, then the permitted maximum is £50,000. If the qualifying lease is more than £2m in value, then the permitted maximum is £100,000. These maximum figures will include interim costs paid by a tenant, such as paying for waking watch patrols, in the five years before commencement of the relevant provision.

There will be no costs for leasehold properties valued less than £325,000 in Greater London or £175,000 elsewhere. There will also be no service charge payable for each building to which the legislation applies if the landlord group's net worth was more than £2m at 14 February 2022, per relevant building.

The repayment period for applicable charges has been extended from five years to ten years. Provisions are also included to ensure that leaseholders could not be charged more than 10% of the permitted maximum each year.

The proposed schedule would cap the amounts that can be charged to leaseholders where landlords do not have the means to pay for any remaining non-cladding defects.

Requirement for safety manager and assessment authority removed

The proposals remove the clauses placing a duty on the principal accountable person to appoint a building safety manager. Following consultation, it was deemed that the appointment of a building safety manager would place an unnecessary and costly burden on leaseholders.

The responsibility for meeting safety obligations under the bill will remain with the accountable person or persons, but this change will allow them to make arrangements in a way that is most appropriate for their building and residents.

Similarly, the proposal to establish a fire risk assessment authority (FRAA), which was introduced at committee stage, has not been included in the most recent version of the bill.

The FRAA would, if it had determined that a building or any part of it posed a serious fire risk and that lives may be endangered, have issued a notice requiring remediation or levelled a fine.

Sanction proposed on certain developers and manufacturers

A proposal has been made that would allow the secretary of state, by way of regulations, to prohibit a 'person of a prescribed description' from carrying out development in England, as defined by the Town and Country Planning Act 1990, or to impose building control prohibitions.

The aim of doing so would be to secure the safety of people in or about buildings in relation to risks arising from buildings, or to improve the standard of buildings. The prohibition would supersede existing planning permissions.

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Building Safety Bill: the latest amendment

By Matthew Collins MRICS and
Antony Parkinson MRICS



How to prepare for the Building Safety Act

By Simon Lewis

The proposed amendments do not define the term ‘person of a prescribed description’, however. It may be that this class is left deliberately wide so it can be used as a means of forcing contributions to the government’s £4bn fund for repairing or replacing dangerous cladding. At the time of writing, though, there is a suggestion the government’s negotiations with developers mean that these contributions will not be required.

Proposals emphasise leaseholder protection

Fundamentally, the Building Safety Bill provides additional protection to leaseholders – not just from fire risks but also from the financial burden of remedying defects.

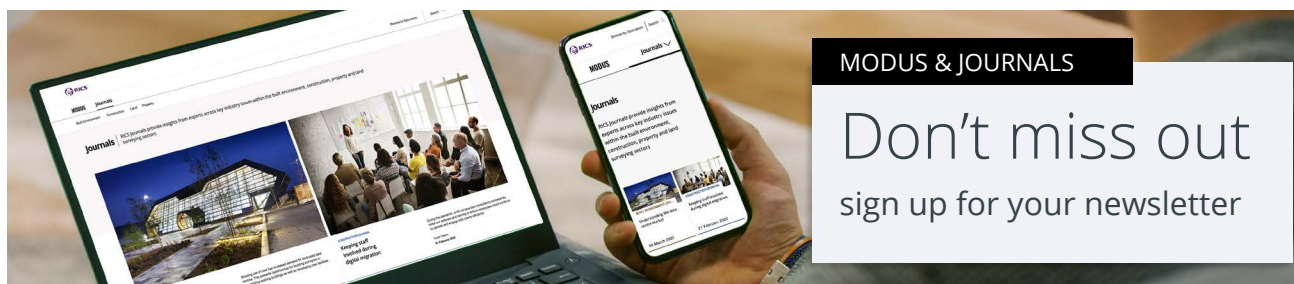
These proposed amendments extend the range of buildings that may be affected and expand the class of those who can be forced to remediate defects or pay for works to be completed.

Those involved in property management therefore need to ensure that they are aware of their potential obligations under any remediation orders, and that they have a clear paper trail of any advice provided to their freeholder employers about their obligations.

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Fire safety
Legal/regulatory compliance
Risk management



What does a conservation engineer do?

BUILT ENVIRONMENT JOURNAL
First published 14 April 2022



Historical ruins on the Dingle Peninsula in County Kerry, Ireland © Dmitry Anikin via Unsplash

Building conservation surveyors and conservation engineers are critical to repairing heritage buildings. A better understanding of how engineers work can ensure successful collaboration

By Aoife Murphy

A lot of the initial investigations undertaken by a conservation engineer overlap with those carried out by a surveyor and, indeed, a conservation architect.

Where the engineer's role differs is that it mainly concerns the stability of a building. The engineer is the one who determines whether something is structurally sound.

Defining the engineer's role

The role of a conservation engineer varies from project to project. On a lot of masonry ruins, for example, the client is usually the local authority. With such projects, I am given a budget and have to work backwards to specify works that cover the most exposed, unstable areas. In this respect, my role corresponds a great deal with that of a surveyor.

On larger projects, conservation engineers tend to be part of the design team. This works well because we can just focus on our main concern – the structure itself – while the architectural details are dealt with separately.

As part of a team, we can each discuss what we need, in terms of investigation, from the start. The client's budget is still critical, though. If this is tight, I have to consider the most vulnerable part of the building and start with that.

Having a discussion with the project lead or client about outcomes, budget, expectations and realities early on in a project, alongside the initial site visit, helps establish a clear objective and pragmatic outcomes for the project.

The earlier a structural engineer is engaged, the better. Discovering issues early on allows these to be accounted for in the preliminary budget; often, our interventions are expensive but necessary. Early engagement also allows time for us to organise investigations and carry out our calculations. Being put on the spot when a job is already on site and the works we are looking at are critical creates unnecessary urgency.

On contractor-led projects, it seems more common that an engineer is brought in when a problem is discovered on site. This pressures us to decide quickly, putting us in a difficult position from the get-go. Any new investigations required are then an unforeseen expense, and the time to design and make decisions holds up the project. This is not an efficient way to work.

The earlier a structural engineer is engaged, the better. Discovering issues early on allows these to be accounted for in the preliminary budget

Surprises are often uncovered on site, but any issues can be caught early if a conservation engineer is involved in site visits and can see works progress. This gives time to develop and communicate possible solutions, allowing for adjustments during the work for proper repairs. The engineer often proposes a measure but, in some cases, never sees the end result. I do not sign off on something until I have seen it.

Questions to be asked

Conservation engineers need to be able look at the building as a whole, consider how it has functioned over time, understand the construction materials used and how they work, be sensitive to the needs of the building, and be practical. Ultimately, though, they need to quantify what is there, analyse it and choose an appropriate intervention if necessary.

Before I look at a building, I consult old maps and any relevant history I can find, to try to ascertain an age and use. I look at local authority maps and current street views to see what services and facilities are at or near the site. From an engineering point of view, I am thinking about wind direction and land features such as settlement. I ask questions such as whether there is peat in the vicinity, where the nearest rivers or hills are, whether the area is subject to flooding, and whether there is a drain map for the area.

When on site, it's time to think about health and safety. Is it safe to enter and explore? A walk around the outside reveals a lot. How does the land lie? Is the building in use? Were or are there neighbouring buildings? Sketching and annotating a rough plan of the outside and inside of the building can help record the answers.

Surprises are often uncovered on site, but any issues can be caught early if a conservation engineer is involved in site visits and can see works progress

Is there any subsidence? Is or has there been movement? Have buttresses or other features been added? Water ingress usually causes the most damage, so if it is getting in where is it getting in and why?

From the outside, note the roof materials and condition. Look at the chimneys and flashing if possible. Vegetation, drains, gutters and downpipes should also be noted at this stage, as this can help a lot with the internal investigation. For instance, it can usually enable me to dispel the myth that there is rising damp inside.

Are there cracks, and if so, which way are they opening? Are the walls straight, and were they ever? Is there a render, limewash or is it pointed? Has this changed over time? Has it been repaired? Is it holding water?

Foundations can be a particularly tough feature to assess. Indeed, is there a foundation at all? Also look around the site for drain hatches. Are there waste-water or foul drains? Is there any sign of a septic tank, soakaway or a mains connection? What other services are around the site?

Look out for water ingress and follow the damage it has caused. Look out for cracks. Check whether doors and windows are working. Any evidence of subsidence over the years is particularly visible around doors. If possible, access the roof space. Check the size, spacings and shapes of the trusses, purlin and rafters, writing this down and sketching them if possible. Check the rafter ends for water damage or rot.

Is there insulation? Is there lime parging or torching? Is there ventilation? Check under floorboards, look for wet or dry rot in timber, and check joist ends for decay and water damage. What condition are the stairs in? Is there a basement? Is it accessible and safe? Note ventilation, damp and cracks.

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Coordinating conservation of the UK Parliament

By Andre Iulian

Disciplines demonstrate complementary competencies

The parts of a site visit where engineers' and surveyors' roles closely align is in recording what is present. The purposes of doing so, however, differ.

I need to assess capacities, the weight of a wall, the size of a beam, and the number of people who will be standing on this floor at any one time. My role is to check that what is there is sufficient, or whether we need to adjust, for instance, the size of the joists or a beam or column to meet the new needs.

If the two professions can work together effectively then tasks do not need to be doubled up. Surveys and exploratory works can help get a clearer picture before repair designs, analyses and drawings start to be prepared.

Ground investigations are particularly important in ascertaining what foundations are present and what the ground itself comprises. Camera surveys of drains, use of ground-penetrating radar to find services and laser surveys of existing buildings can all contribute to a more accurate repair strategy. Testing existing mortars is essential to find a suitable match in terms of sand and lime.

With conservation, however, expecting the unexpected is helpful. A good relationship with the contractor on site and a willingness to communicate and adapt as you go is essential.

Working from conservation principles

The [Society for the Protection of Ancient Buildings \(SPAB\)](#) supports an approach based on the philosophy of conservative repair.

As the recipient of a SPAB Scholarship in 2017, I learned a lot about reading a building, and restoration almost became a bad word – who am I to decide to wipe away years of history of a building and return it to one specific period?

Ground investigations are particularly important in ascertaining what foundations are present and what the ground itself comprises

The history of a building should be there to be read: an old roofline should be seen, and a filled-in door or window should remain visible for those who look attentively at a building. However, when it comes to structure, the building must be safe and secure.

I endeavour to retain as much of the original or older fabric as possible. This could mean splicing roof trusses or rafters to replace water-damaged ends. The old phrase 'as much as is needed, but as little as possible' comes to mind.

This could mean providing extra support to retain older material. It is not always the cheapest solution, but in terms of conservation it is important to retain as much of the original or older fabric as you can. Gathering data for informed calculations

Considerations for the conservation engineer

While devising repair strategies, I have to consider what the clients wants, what is realistic, what a conservation officer might want to see and what is best for the building. This involves interesting conversations in which I suggest practical measures, although it may not be possible to tease these out fully until we are on site with a contractor.

Repair strategies vary with the client's budget. I find that, typically, those with the smallest budgets allow us to prioritise what is needed to save the building; old features are saved, if possible, with the least intervention.

Interventions to save a building need communication and discussion, with a range of options on the table. Having to revert to design and first principles takes time and thought – something that we have to push for on tight budgets or timescales.

Calculations are different in conservation to new design. Investigation and measurement are vital to uncover as much information as possible to make informed calculations. All historical data needs to be reviewed to see whether there are old drawings or reports with details of the structure.

Floors need to be opened up, roof spaces must be visited, foundation depths need to be checked and joist ends need to be seen. The supporting structure must be figured out, either to confirm what is known or to find out what the structure is.

However, we cannot open all floors or walls – especially plastered walls and decorative floors – so practical choices where investigations can be carried out need to be requested. Where do we see water damage, or where do we assume structure is hidden? Educated assumptions can follow.

Once we know what the structure is, we can apply our current codes to check the capacity of the structure. We have to understand that this building is still standing after perhaps hundreds of years. Design nowadays is pushing towards smaller, less visible structure, but these buildings were built using rules of thumb.

Walls are thick and heavy. However, changes of use, additions and removals create weak points. These can be strengthened with smart, carefully detailed additions, stiffening joists with plates or noggins, replacing water-damaged lintels, stitching cracks and propping unsupported masonry. Major interventions are sometimes needed, but often finding the weak points and strengthening these can be enough. There is no single answer, except to check where the water is coming in and prevent this.

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I recently worked on church ruins in the Irish Midlands, where the only remaining gable was overturning after being monitored for ten years. A community group were very involved in the project, and I put multiple options to them.



Church ruins project for Offaly County Council © Aoife Murphy



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I had to consider:

- the safety of the work
- the weight of the masonry
- the angle of the overturn
- the history – the soil in front of the gable had been dug out 50 years before
- the location of graves, both visible and invisible
- the materials we would use
- the equipment the builder needed to use or avoid using
- the order of works
- the final appearance
- public perception.

Using surveys, I was able to check the overturning moment for the gable. The surveys provided accurate measurements, including heights and a thickness for the wall, while I was able to calculate its weight. We also had ten years of monitoring data showing that the movement had continued in that time. Some trial holes made under archaeological supervision confirmed the depth of the foundations. All this allowed me to make sound decisions and influenced my design.

The final result incorporated modern materials such as steel and concrete to tie together and stabilise the gable face, but we used local stone to make the new buttresses more sympathetic to the original construction.

My designs and repair strategies are unique to me. They are practical, simple and as clear as possible. They also depend completely on the circumstances of each project. There is no common approach. This is what makes conservation interesting. Two engineers will provide you with two different responses to problems. We have all learned on the job, as there is no dedicated conservation engineering course.



Church ruins project for Offaly County Council © Aoife Murphy



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Having worked in Christchurch, New Zealand during the Canterbury earthquake sequence from 2010 until 2017, for instance, I gained a thorough understanding of settlement. I now know how to read buildings, differentiate between recent movement and historical, and understand the importance of site geography.

It is important to source engineers working in conservation who understand the materials in older buildings and are able propose measures that are sympathetic to the materials and last well. Knowing when to use cement or not can be critical for these buildings in the long term.

Providing practical, cost-effective measures that are neither overdesigned nor inadequately designed is essential. The Conservation Accreditation Register for Engineers ([Specialist professional registers | Institution of Civil Engineers](#)) is a great place to start if you are looking for a conservation engineer. I am currently working towards this accreditation.

When working in conservation, no job is ever the same as the last. Time, careful measurement and investigation is needed to ensure a considered approach for each project, no matter how big or small.

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How to assess significance

Significance expresses what is important about a structure or building, and there are different levels. Briefly, significance is determined by dividing a building or structure into parts and then assessing each against a set of criteria informed by heritage values. [BS7913: Guide to the Conservation of Historic Buildings](#) contains a detailed description of this process and of group heritage values.

- Aesthetic group heritage value is determined by assessing the quality of a building's appearance. This could involve considering any aesthetic changes since construction, and determining whether these are negative, positive or somewhere in the middle.
- Evidential value represents how a building or parts of it provide evidence of the past in various ways.

- Communal value represents the emotional connection individuals or communities have with a building or structure.
- Historic value represents the associations the building has accrued with time. This could reflect the historical reason why a building was first developed or went through significant changes. Or it could reflect an historic event or occasion that took place in or near the building.

Some assessors use additional criteria to determine how significant a building is; for example, whether a building’s significance has an international, national or local dimension. The number of attributes can also be considered, ranging from ‘most’ to ‘not many’ or ‘none’.

Assessing parts of a building against these different heritage values is fairly subjective, and for this to be robust, assessors must be disciplined, have sufficient expertise and work to a framework formed by the above sets of criteria.

In the interests of working consistently, a specific level of significance in one building should mean the same in other buildings. Therefore, making comparisons between buildings should also be part of determining significance – hence the experience needed to do this properly.

Significance can be ascertained during production of a conservation plan, where it will help with the development of conservation policies, heritage statements or statement of significance. The significance values in particular can then be used in heritage impact assessments.

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