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MAKING BUILDINGS BETTER

TECHNICAL BULLETIN

FOR RESIDENTIAL SURVEYORS

THE INSURANCE MARKET



THE INSURANCE MARKET
WHEN IS A COMPLAINT A NOTICE OF CLAIM?
KNOW WHO YOUR CLIENT REALLY IS
CAST IRON HOUSES
CARBON MONOXIDE
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THE TECHNICAL BULLETIN

FOR RESIDENTIAL SURVEYORS

Welcome to the Technical Bulletin. This Bulletin is designed primarily for residential surveyors who are members of RICS and other professional bodies working across all housing sectors. Other professionals may also find the content useful.

Produced by Sava, you will find technical articles, regulation updates and interpretation and best practice. We hope you find this useful in your day-to-day work and we welcome any feedback you may have and suggestions for future publications.

Who we are

We are a team of building physicists and engineers, statisticians, software developers, residential surveyors, gas engineers and business management specialists.

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INSURANCE

THE INSURANCE MARKET

WHAT IS GOING ON, WHY AND WHAT SHOULD YOU DO ABOUT IT?

NATALIE DEACON, SENIOR ACCOUNT EXECUTIVE, HOWDEN GROUP

There have been notable changes in market conditions for the Professional Indemnity Insurance (PII) industry over the last year. In this article we will explore the factors causing insurers to leave the PII sector and give advice on how best to approach your renewal to get the best possible terms.

Performance concerns

For the first time in many years the insurance market started to 'harden' in 2018. It began with the intervention of Lloyd's of London, following a review which highlighted the poor financial performance of PII underwriting generally. Non-US PII was the second least profitable class of insurance at Lloyd's, who have since stated that growth needs to be secondary to performance. Consequently, many of their syndicates were told to write less business whilst they address their deteriorating loss ratios.

As a result, several syndicates withdrew from the PI market altogether. Unfortunately, the remaining insurers have little desire to write more premium in 2019, while others are increasing rates and/or limiting their capacity, which is creating an uncomfortable environment for many firms and brokers trying to obtain PI cover.

The negatives

Whilst valuation work accounts for a small proportion of the activity carried out by surveyors, historically this has been the most claims intensive area and losses from

valuations for lending have always been a concern. Insurers are still experiencing claims in this area and a potential for fallout in the property market as a result of Brexit is also on the radar.

In addition, PII has what we refer to in the insurance market as a 'very long tail'. This is because claims can be slow to develop and emerge, meaning it can be some time before an insurer can have certainty regarding the level of loss on an underwriting year. As you can imagine, this creates a challenge for insurers managing their pricing strategy for this sector; if cover has been under-priced over a number of years, then the accumulating losses can ultimately lead to an insurer having to withdraw from the market.

Hope for the future

Although we are currently facing a difficult period, the steps insurers are taking now will eventually reduce the losses and gradually improve the overall profitability of the PII market. As additional capacity is attracted back to the market, we can only hope that conditions will begin to soften.

The renewal process

However, it will be sometime before we see insurers enter back into the sector and increased insurance capacity. In the meantime, surveyors have to stay in business and find insurance. So, what steps should you be taking if your renewal is due?

The days when you could simply phone up your friendly local broker a few days before your policy was due to renew and have your renewal through within a few days are long gone. Now you need to start your renewal process early.

As the market hardens, insurers can and will insist on more information. Proposal forms won't be a five-minute job and will take time to complete. This is particularly true if your existing insurers have left the PI market. In that situation you will be forced to find a new insurer and may struggle to obtain even an extension or run-off cover. If you believe your insurer is pulling out of this market, it is essential that you plan ahead.

Internally, you should be preparing for your renewal date 4-6 months in advance. This allows enough time to collect and correlate the information for your submission including updates on your current claims from your previous brokers and/or insurers.

Depending on the size and complexity of your organisation's profile, we recommend that you present your renewal submission to your broker three months in advance of your renewal date and no less than two months in advance.

Your existing broker should give enough notice of any such issues and if they do not, you should try to keep a regular dialogue with them or consider changing brokers. We find the most common complaint from new clients is that their previous broker suddenly increased the premium or has no availability of cover close to renewal.

If you engage more than one broker, ensure they put in writing the markets they plan to approach before you send either broker your submission. This is because insurers do not react favourably to seeing a submission from more than one broker and, with limited insurers prepared to write firms with surveying and valuation for lending exposure, most brokers are likely to approach the same insurer.

If multiple brokers do put forward the same insurers, then you should consider which broker has the strongest relationship to get you the best terms. You're entitled to request they evidence why they are best placed to be your broker of choice and it is worth asking whether their access to the Insurer in question is direct or via another broker.

Top tip – avoid a broker who offers you a premium saving without having seen your submission!

The proposal form

It's vital that the information provided on a proposal form is comprehensive and professionally presented:

- **Type it, don't write it** – if your presentation looks professional, insurers will take you more seriously. If you are unable to type your responses on the form, ensure your handwriting is legible. If a box is too small to fit the information, add an appendix.
- **Complete the form** – if a question is not applicable, write "Not Applicable" rather than leaving the box blank as this may lead to your broker or potential insurer being unsure if you've forgotten to complete a section.
- **Fee split/activity breakdown** – ensure this breakdown adds up to 100%. You may be surprised by how many submissions do not.

Fee income

If your fee income has increased or decreased, it is advisable to include an explanation in a covering letter as part of your submission.

If, for example, your fee income increased as a result of charging higher fees for your services, an insurer may assume your exposure has increased as you are carrying out more work, as opposed to carrying out the same amount of work, but charging more for your services. A good broker will argue that increased income should not affect the renewal quote as the level of exposure has not changed.

If your fee income has decreased, you should clarify why that is. Perhaps you had a large, one-off instruction that's unlikely to be repeated so clarify any anomalies that could be questioned by an insurer.

Valuation banding

You can help to make the process run as smooth as possible if you are clear and concise.

If you carry out valuations for lending, provide a breakdown of valuations by property value. This helps insurers to better understand their exposure. For example, list the number of valuations you carry out for properties valued at GBPO-GBP500k, then GBP501k-GBP1m and so on.

Splitting out your business activities also helps your broker and insurer better assess the areas of exposure in which you carry out work. For example, if you carry out Home Buyer Surveys excluding valuations make this clear.

Panel work

If you work with panel managers, let insurers know who they are and the amount of valuation for lending work that comes from them. Since panels usually provide a form of quality assurance this may help to reassure the insurer. This also applies to lenders – let insurers know where your fee income comes from.

Loan to value

Whilst most proposal forms will ask if you know the LTV on the instructions you receive, it is important to expand on your internal processes regarding qualifying the type of valuations you will or will not accept and if you will only take instructions for lending under certain LTV.

Valuation profile

When calculating a premium, insurers usually look at a

firm's valuation profile for the past 6 years. If you can establish a mortgage valuation you have carried out has been redeemed or you can evidence a property has been re-sold since your valuation, the likelihood of your valuation leading to a claim may reduce. Websites such as Rightmove and Land Registry can be useful for obtaining this information. This might take some time and require a certain element of 'forensic' work, but it will re-assure insurers greatly if they can understand the level of exposure they have.

Tell your insurer what work you turn away

You should also notify insurers if you turn down instructions because it falls outside of your expertise or because you are unfamiliar with the lender, for example. This shows the insurer that you look to mitigate risk for not only your firm, but for them also.

Claims

One of the most important aspects in your submission is providing a clear and detailed claims history.

A well written claims commentary should always contain your perspective on liability as well as your views on how the claim came to exist in the first place. It should also include the measures you have implemented to mitigate against the same thing happening again.

Insurers understand that claims happen. However, they want to see evidence of any lessons learnt from past claims, where applicable, to avoid a repeated claim in the future. If you have received multiple claims from a specific lender or client, or against a specific surveyor, conduct a review of other valuations or work done around the time to see if there may be any other concerns. This demonstrates a proactive approach to insurers and that you take risk management seriously.

Private appointments and new clients

When taking on a new client, it's important to carry out due diligence. We have seen many claims coming from smaller firms who accepted just one instruction from a client that was new to them. When asked why they accepted the instruction, many advise the fee was too good to turn down. We often find that if something seems too good to be true, it usually is. You're entitled to ask questions so don't be afraid to ask a new client who else they have approached before coming to you because you may be one of many. This could be a sign that, potentially, the job may not be worth the risk.

We encourage our clients to include a letter or note setting out the qualities of their firm which may not emerge from the answers on the proposal form

Be concise - put yourself in the shoes of your insurer and focus on issues that are likely to make a difference. For example:

- The culture within your firm
- Risk management initiatives within the last twelve months
- Specialisms within the firm
- Details of higher risk areas of practice that are made lower risk in your firm, and why.

How your PI cover could be affected by a hard market

In general terms, a hardened PII market means higher premiums and a reduced choice of insurer. When capacity is reduced, there is a direct impact on competition. Less competition means the remaining insurers have more ability to dictate terms and they can be more selective as there are fewer alternatives available to insureds and their brokers. The more selective approach does not just affect premiums - coverage provided by insurers may also be reduced. This can manifest itself into several different areas:

- Reduced Limit options and or changes to the Limit of Indemnity basis
- Additional Exclusions, particularly in respect of fire safety or cladding
- Removal of additional clauses that are broader than the RICS minimum terms and conditions
- Increased retained risk, with insurers looking to increase the self-insured excess under your policy.

We have seen several firms requiring dispensation from RICS for the terms they have obtained, along with firms looking at reducing their total Limit of Indemnity and/or consider diversifying their business activities, and in extreme cases, looking to exit carrying out valuations for lending. Here are some points you should consider:

- Ceasing to carry out valuations for lending will not have an overnight effect on your PI premium as insurers will still have the exposure of any work you carried out for a minimum of 6 years
- Reducing your Limit of Indemnity to achieve a cost saving may result in you breaching any terms of engagement you have entered into with a client where you confirmed you would maintain a specific Limit of Indemnity. Ensure you check the level you have capped your liability at in your valuations or agreements with clients and lenders.

At present RICS require a firm to have a Limit of Indemnity on an Any One Claim Basis and it is the primary £1m where most of the premium is focused, being the layer that is the most vulnerable to claims. This has caused insurers to look at changing the basis on which they offer terms. You may come across some terminology when you come up to your renewal. The most significant to date has been insurers offering revised Limit Basis, commonly known as an "Aggregate Limit" or an "Aggregate with unlimited reinstatements".

"Aggregate", in simple terms, means the total Limit for which insurers are liable for in a policy period, including legal costs and expenses. Once the Limit has been exhausted, the firm will have no further protection. For example, if you have £1m in the aggregate Limit and you were to have a claim worth £1m, and then a claim for £500,000, you will be liable to pay the £500,000 from your own pocket.

Over the years, the aggregate limitation has been mitigated by the availability of automatic reinstatements being offered, which is often referred to in the market as "Aggregate" with "Round the Clock" unlimited reinstatements. This Limit of Indemnity is effectively the same as "Any One claim" cover and only works if you have Excess

layer policies that sit above your Primary Policy.

Conclusion

While rates have hardened and some insurers have reduced their appetite, there is still capacity in the PII market.

Our best advice is to stay informed, plan ahead and present a professional proposal. If you are business planning for next year, allow for a likely increase in insurance premium no matter how good your claims history.

And remember, getting the best deal is always a team effort between you and your broker, so ensure you maintain contact and respond to additional questions your broker and insurer may ask of you. If you feel your existing broker may not be presenting your case as well as they could be, consider changing brokers, but again – don't leave this to the last minute.



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claim

WHEN IS A COMPLAINT A NOTICE OF CLAIM?

A WORD OF WARNING

KIM ALLCOTT PHD BUSINESS DEVELOPMENT, ALLCOTT ASSOCIATES

A year ago, despite having continuously held PI insurance for over 20 years, Allcott Associates found themselves facing a 6-figure claim without an insurer willing to provide cover. This story has a happy ending, with the claim being successfully defended in court (by an insurer), but in sharing this cautionary tale, Kim Allcott hopes to save other firms the same angst that they experienced.

Background

In 2017, Allcott Associates received an email from a client detailing some issues they had with a survey and asking for a copy of our firm's complaints procedure. This was provided immediately, along with explanations addressing the issues raised. When we didn't receive a reply for several weeks, we considered the client to be satisfied with our response, and we put the communication to the back of our minds.

Later that year, we switched PI insurers. We will call them Company A and Company B. We switched from A to B.

To our surprise, 9 months after we received the client's initial email, we received a formal complaint from them. Initially we had no concerns – we knew that we could defend every point on the complaint. Furthermore, some desk research revealed that the client owned the company that quoted for the claimed works, and they therefore had a substantial conflict of interest. We duly notified our incumbent insurer (Company B), expecting a straightforward case. Indeed, they responded quickly to confirm that they would provide the necessary legal

support. We heard nothing more for some time, despite chasing our broker. Then, just 1 week before the formal response to the claimant was due (leaving us no time to compile a case), the insurers told us that they considered the initial email to be the complaint, and that Company A should therefore provide the cover.

Sticky situation

Of course, company A disagreed! They were convinced (as we had been), that the formal complaint constituted the claim, not the original email correspondence. Our broker, Company A and Company B were all reassuring us that we were covered, but nobody could tell us who we were covered by.

Given that both insurers were RICS-approved, we immediately sought advice from the RICS. This did not prove to be reassuring – the RICS suggested that we were not insured owing to non-notification, as per the terms of our insurance policy. However, encouraged by the assurances of our broker and our belief that the original email was ambiguous, we did not feel that this assessment was fair or accurate, and so we looked for further advice.

We approached the insurance ombudsman, but we were told that because we employed more than 10 people and had a turnover of over £1 million, we were not eligible for their support. Next, we went to Lloyd's of London for advice. Although they did not have the authority to force the companies to pay up, they did at least offer to apply some leverage, particularly because if cover was not provided there was a chance that the client could be left out of pocket.

We also sought our own legal advice and learned that the RICS guidelines for PI insurance state that insurers cannot avoid cover by virtue of late notification, as long as the failure to disclose was 'innocent', i.e. there was no intent to deceive.

The saga continued

Despite this regulation, both Company A and Company B continued to refuse to cover the claim. We moved to go to arbitration through our solicitor, at which point Lloyd's were able to facilitate communication between the two companies. Given that the issue was agreed to be innocent non-disclosure, and therefore the original email was identified as the initial complaint, company A agreed to cover us.

What are the rules?

As we all know, if you receive a claim, you must notify your insurers immediately. According to the RICS, a claim is "a letter formally advising you of legal action, or an indication to the effect - 'I'm going to sue you'". However, as we have found out, insurers may define a claim differently. To be safe, we would recommend getting in touch with your broker or insurers at the first sniff of a claim.

If a notification is missed, however, you may still be entitled to some cover. According to the Insurance Act 2015, if non-notification is 'not deliberate or reckless' then the insurers still have obligations towards the insured. This doesn't necessarily mean full cover - if the non-notification is so serious that the insurer would not have agreed to insure you in the first place, then all they need to do is refund the premium. If timely disclosure would have raised your premiums, then the insurer can proportionately reduce the amount paid on the claim.

Take home messages

Everyone makes mistakes and some complaints will be valid. Many more will be down to misunderstandings or unreasonable expectations; for example, we have received complaints for not checking the condition of the foundations on a building survey, and for having the property owner's car in the driveway in the photos in the survey report! Understandably, sole traders and companies may be unwilling to notify insurers of all client grumbles for fear that their insurance excess will increase. Nevertheless, however absurd the complaint, if there is the slightest chance that it could progress to a claim then notifying early is good practice because it allows insurers to build a strong case.

Furthermore, if you are aware that a complaint could possibly progress to a claim, you will void your insurance contract if you do not disclose it.

It's also wise to stay up-to-date with RICS and PI insurance guidance. The landscape is constantly changing, and new communication platforms introduce more questions. For example, does a bad review warrant notification? What

about an angry tweet? If in doubt, open and honest dialogue between surveyors and insurers seems to be the only sure-fire way to make sure that cover is comprehensive and fit for purpose.

Comments from Sava

It can take time to build a good working relationship with one insurer and/or broker, and if you switch to a new insurer or broker, remember that a new working relationship will need to be built from scratch.

Having changed insurers last year, we quickly realised that the expectations between two insurers can change significantly. Our previous insurer trusted that we were competent to determine if there was a 50% or more chance that a complaint would lead to a claim, and they were confident that we would not jeopardise our or their position when handling queries.

However, we had to earn the trust of our new insurer who did not adopt the same approach and we were required to notify them of all potential complaints or claims.

You should have a clear discussion with your insurers on this aspect to ensure everybody has the same understanding and to avoid any problems further down the line. In our experience, when a customer questions something in the report, clarifying the level of service often rectifies the situation. However, you should make it clear with your insurer if you intend to deal with emails that seek 'clarification of the service' and they can confirm if you should notify them of such emails, and if they need to approve any response before it is sent.

Communication is key and it's very important to build a good working relationship with your broker and PI insurer. We recommend being honest and open when entering a new policy and during your discussions, and hopefully, you can avoid being challenged.

Kim Allcott is Director of Business Development at Allcott Associates LLP,

a firm that provides RICS residential and commercial surveying services across England and Wales. At Allcott Associates, Kim and a team of Chartered Surveyors and Structural Engineers are working to improve and modernise surveying practices. By doing



so, they hope to benefit both those in the industry and those that rely on it for residential and commercial services. A key goal is to explore best practice for combining expertise across surveying and structural engineering disciplines, in order to increase confidence in the industry and enable clients to have a thorough understanding of their properties.

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KNOW WHO YOUR CLIENT REALLY IS

A CAUTIONARY TALE

SAVA TECHNICAL TEAM

In this article we relate the tale of a claim against a surveyor – where the claim wasn't by the person who had commissioned the survey in the first place (who we will call A) – but was in fact another person (who we will call B). The success of this claim hinged on whether person B was also the client. It was a complicated situation and we cannot go into too much detail, but we hope that by sharing it other surveyors can take care to prevent something similar happening to them.

Brief background

The surveyor in question completed a Home Condition Survey in 2013. The surveyor was commissioned by A. A was known to the surveyor, being a local businessman. It was A who signed the terms of engagement and paid the invoice and it was his name on the front of the report. All emails between the surveyor and A regarding the inspection and the report were addressed solely to or from A. However, on a couple of the emails a third person with a different surname was copied in and A used the term 'we'.

The surveyor was not advised in any email exchange who this third person was and indeed, because the surname was different it did not occur to them to clarify that the client was anyone other than solely A. The key point here is that

the client and surveyor were known to each other – not as friends but as business acquaintances.

The surveyor carried out the inspection and provided the survey report, naming A on the front of the report. We should also highlight that the report contained a disclaimer which stated that the report was for the use of the client and that the surveyor accepted no liability if it was used by someone else. The only query raised by A was about obtaining additional information that had not been available on the date of inspection. The surveyor answered this query and heard no more. It is also worth noting that another RICS valuer also inspected the subject property and endorsed the value of the Property. Neither surveyor considered that there were significant defects at the time of the original inspection which had an impact on value.

The Claim

Nearly 4 years later the surveyor received a professional negligence pre-action protocol letter of claim from B's solicitors. The letter claimed that prior to B purchasing the property A was acting as their agent when instructing the surveyor to undertake the Home Condition Survey on their behalf.

The surveyor and the legal team appointed by the insurer (since this was a pre-action protocol letter, solicitors were appointed) carried out a detailed investigation. It transpired that B had waited some considerable time before there was any indication of anything wrong. Approximately 2 years after the original survey, a number of investigations were commissioned by B, including a Schedule of Defects Report which set out a schedule of repairs needed and the estimated costs of those repairs. However, it was a considerable time after this when the surveyor received the claim letter which was accompanied by the Schedule of Defects Report.

The very lengthy defects schedule included items costed at only a few pounds to much larger sums for replacement of more significant items. Many of the small items would not be considered to affect a person's decision to buy (broken bolts for example) and would not be relevant to a Condition Report. Other issues were likely to have been worsened between the time of the original inspection and the schedule of repair. Also, some items were not so much repair as improvement or 'betterment' when judged against the condition of the property at the time the surveyor had carried out the original inspection.

However, this schedule of repairs formed the basis of the claim, which was not insignificant in value.

B also instructed an expert who had a good reputation in the area and worked for a well-respected, national firm. The expert had submitted a report indicating that they considered that the defects identified in the schedule of repairs resulted in a diminution in value of two thirds of the repairs costed in the detailed schedule of repair.

Was this a spurious claim and why the time delay?

The surveyor confirmed he had received no previous complaint or concerns from A (or B) in the four years between the survey date and the claim, and there was no warning that a pre-action protocol letter would be issued. The surveyor had only ever been dealing with A, so did B even have a justified claim against him? It's an important reminder that sometimes there may be other factors at play and unfortunately, it can mean surveyors and other professionals in the property industry find themselves caught in the middle of an unpleasant situation.

Who was owed a duty of care?

The claim was brought on the basis that the surveyor knew, or ought to have known, that B would be relying on his report. B stated that A was their agent. Remember, A was not a stranger to the surveyor. This may indeed have been the case. However, there are cases, such as *Banca Nazionale del Lavoro SPA v Playboy Club 2018* where the decision found that an advisor does not owe a duty of care to an undisclosed principal. The judgement explained

that duties of care are based on the principle that there is some kind of relationship between the claimant and the defendant which requires the defendant to protect the claimant's interests.

B would therefore need to prove that the surveyor knew that B was A's principal. B was relying on email exchanges which they were copied into. These exchanges do not give the surveyor any indication that it was in fact B who was buying the property and would be relying on the information within the report or that it would be B who was owed a duty of care.

On the face of it, there is a simple defence. Namely that the surveyor had no knowledge who B was or their role in the transaction. However, the argument presented by B was that the surveyor should have known who they were. The fact that the surveyor did not know that B was in fact the purchaser could not be proven and it was entirely his word against theirs.

The surveyor also faced the additional difficulty in preparing a response to all the defects mentioned because, unfortunately, his evidence had been corrupted. **(We have said many times that it is so important to make sure that all records relating to a survey are stored in such a way that they are secure and can be accessed in the future if needed. Ideally, you should have a back-up copy saved elsewhere in case one copy becomes corrupted or lost).**

This case didn't go to court but due to the nature of negligence claims and the costs associated with defending them, sometimes a commercial approach is taken to avoid even further costs accumulating.

What have we learnt?

There is no doubt that this whole case caused much stress for the surveyor, so could it have been avoided?

- The claimant's case would have been weaker if the surveyor had never heard of A. But, if A was completely unknown to the surveyor, would the claim have even been made in the first place? That we will never know, but it does provide a warning that care should be taken to identify your client, and particularly if you are communicating with someone already known to you in some way. We recommend you clarify with your client who a person is if they have been copied into an email.
- Whichever report format you use, you should ensure the report is clear about any duties owed to third parties. A clear disclaimer that a report can only be relied upon by the named client should be included and highlighted.
- As we always stress, it is imperative that you have contemporaneous notes and photographs to defend a potential claim. It is essential therefore that all notes, photographs, plans etc. are stored in a format that is readily accessible for some years in the future and is backed up. We cannot emphasise this enough.
- No matter how good a surveyor you are, you may still get caught up in a long and stressful claim, so ensure you cover yourself as much as you can.



CAST IRON HOUSES

THE BEGINNING OF A REVOLUTION

IAN BULLOCK BSC (HONS) MRICS MEWI, CARPENTER SURVEYORS

As a Chartered Surveyor, I often find myself feeling very honoured and fortunate in my role. Not only do I love what I do, but I also have the privilege of seeing some fascinating historic buildings. From historic period timber framed, through to present day Modern Methods of Construction built properties, there is never a dull day.

Add to this the fact that I live and work as a residential surveyor within the Midlands region. I am at the very heart of the region that has the claim of being the 'birthplace of the Industrial Revolution'. Consequently, I often find myself coming across fascinating buildings of all types from both a historical and architectural perspective. One such property, is the Cast Iron House.

As with many vernacular buildings, over the centuries locally sourced materials and the local construction methods used were fundamental to the building process. As well as more historic buildings, we can see evidence of this through the Victorian period right up to the Second World War. In the modern 21st century, we often look back and reminisce of buildings pre and post war and recently I came across a pair of semi-detached houses built circa 1925 which are a fine example of local imagination and resource, and a testimony to local ingenuity.

A brief history lesson

Following on from the end of the First World War, there was a shortage of housing and traditional building materials. Speed and ease of construction were important aspirations for house building, especially given population levels and the skill shortage. The National Government also sought to encourage building more homes for the working classes returning after the horrors of the First World War under the 'Homes Fit for Heroes' initiative. Engineers and local building firms were tasked with embracing innovation and

development to meet the requirements of the country's housing needs.

It was hoped that by using iron for building houses, not only would it help to fulfil these requirements, it would kick start the local iron industry which was struggling at the time, both in terms of work shortage and a lack of skilled labour. The result? One of the first prefab houses! It's suggested that it only took 4 workers a total of one week to complete the build and it is believed that there were approximately 500-600 of these property types built throughout the UK between 1925-1928.

Ultimately, they were an experiment in using iron to pre-fabricate buildings and, sadly, only four were ever built in the local area. Why? Well, put simply, cost. In 1925 money terms, at c.£1,000, these semi-detached houses cost twice as much as traditionally built masonry houses.



Figure 1 – semi-detached cast iron houses in Dudley

Homes Fit for Heroes

After the horrors of WW1, Lloyd George delivered a speech the day after the armistice where, amongst other promises, he said there would be “Habitations fit for the heroes who have won the war”. This was translated into the pithier slogan “homes fit for heroes” where “homes” and “fit” implied they would be built to a standard beyond some of the outdated Victorian slums and “heroes” implying a sense of gratitude and deserving.

The legislation that followed this ‘promise’ was well meaning but was hampered by two serious problems: the lack of funds and the extreme shortage in the building industry of skilled manpower and materials.

The government also had to address social unrest and the fear of Bolshevism spreading from Russia. From 1917, industry and the docks had been hit by some damaging strikes. Improving the lives of the working population was, therefore, not just a ‘good thing to do’ but also had a political motive.

The Ministry of Reconstruction was set up in 1917, the term “reconstruction” being in the context of the reconstruction of how government was organised. It was “charged with overseeing the task of rebuilding the

national life on a better and more durable foundation”. Its recommendations covered many subjects, including: a more efficient government administration; women’s roles post WW1; housing; industrial relations; and employment. The main impact on post-WW1 housing was to create a Ministry of Health under which social housing and slum clearance were managed, with a housing department and local commissioners being in control.

The government also appointed architect and MP Sir John Tudor Walters to report on the condition of housing. The result was the “Report of the Committee Appointed to Consider Questions of Building Construction in Connection with the Provision of Dwellings for the Working Classes”, shortened simply to “The Tudor Walters report”. This influential report made recommendations for the design of housing and housing estates. These designs were specifically to:

- set minimum expected building standards and facilities (such as a bath in every house);
- provide house designs that would be both pleasant to live in yet economical with scarce building materials; and
- provide useful guidance as to the layout of a scheme (for example, to build housing in cul-de-sacs. The number of houses that could be fitted would not change but there would be cost savings on road-building when compared to a through road).

The Housing Acts of 1919 and, later, 1923 introduced complicated financing mechanisms, with the later act very much encouraging private companies building on behalf of local authorities and generating the social housing boom that continued to the 1930s.

Construction

The houses were constructed from 600 rendered, cast iron rectangular blocks (yes 600, weighing an estimated 14 tonnes!), which were bolted together and would have originally been lined with asbestos insulation panels. The internal cavities were filled with compressed waste wool and the roofs were traditionally Welsh slate; however, interlocking clay tiles were also used.



Figure 2 – Welsh slate roof



Figure 3 - Internal view of some of the 600 cast iron panels bolted together

The outside of the houses required (and still do) painting every 3-4 years to prevent rusting and corrosion of the steels. They were painted white to keep them cooler in the summer months.



Figure 4 - View of the external painted wall panels, showing early stage corrosion to joints - this is why they are re-decorated regularly to prevent further, more serious deterioration

A concrete ground beam formed the substructure which was stepped internally forming a kerb to support the floor joists and splayed externally to form water shed.



Figure 5 - splayed concrete ground beam



Figure 6 - kerb to support the original floor joists (since concreted as part of the modernisation works)

Setting the bar

What makes these houses so special, in my opinion, is that they are not only one of the earliest examples of prefabricated houses in the UK, but they helped to underpin many non-traditional iron and steel houses that followed years later. During the 1950-1960 period following the Second World War, due to a notable shortage of both material and labour (once again), we went on to see a modern evolution of these cast-iron houses, with the introduction of the more popularly mass produced BISF (British Iron and Steel Federation Houses). Within the Birmingham conurbation alone, it's believed there were some 500 BISF houses built, many of which are still occupied today.



Figure 7 - Example of BISF house



Figure 8 - Example of BISF house

To get an understanding of the numbers, in Birmingham, there are approximately 112,000 council dwellings. Of these, 22,000 are in blocks of flats, being 422 blocks in total. Of the total there are 22,000 low and medium rise properties of non-traditional construction, ranging across 49 different system types. At the time of my research 44,000 of the 112,000 properties were non-traditional.

It's fair to say that the evolution of buildings during the 1920s through to the 1960s was one of the most innovative periods ever witnessed within the UK. This period led to mass production of experimental homes of all shapes and sizes with all sorts of designs, including PRC (Precast Reinforced Concrete) and poured in-situ concrete, steel framed and clad, timber framed, cross wall and modular framework to name but a few.

Metal framed – Some 140,000 such dwellings have, at some time or other, been authorised for construction in the UK (of which several different systems have been used)

Pre-cast concrete – It's understood that around 284,000 dwellings in England have concrete panels as their predominant wall structure

In-situ concrete – Some 332,733 cast-in-situ concrete systems have been built between the 1940s-1970s (with nine different system types noted)

Timber framed – Between 1920 and 1944 some 8,000 timber framed dwellings were built for the UK Public Sector with a further 100,000 built between 1944 and 1975 – many of which have restricted lending terms or may even be unsuitable for mortgage lending

Problems unforeseen

Innovation was certainly achieved; however, what couldn't be foreseen when building using some of these construction methods and non-traditional materials, was the potential for structural failure in years to come. In the early 1980s, investigations by BRE following a fire at an 'Airey house' (constructed of aggregate PRC panels) found that the PRC columns had cracking present, reported to be caused by inadequate cover to the embedded steel reinforcement and chemical changes to the surrounding concrete. Investigations revealed that it wasn't just the Airey house that had these defects and a list of 30 post-war, non-traditional house types were also 'Designated as Defective'. The government introduced the Housing Defects Legislation, which now forms part of the Housing Act 1985, and a Scheme of Assistance was subsequently launched whereby local authorities assisted eligible owners who were able to repurchase or have their property repaired. A small number of properties exist today which haven't been repaired and are still deemed as defective.

Considerations for the surveyor

There are many factors to consider when surveying and valuing non-traditional properties. For instance:

- Are they designated as 'Defective' under the Housing Defect Legislation of 1984?
- See figure 9 for a list of house types which are Designated as Defective
- Have they been subject to a licensed repair works scheme? Repairs must be carried out in accordance with a PRC Homes Ltd licenced system. If subject to a mortgage valuation, is the repair scheme acceptable to the lender?

- Some mortgage lenders will require satisfactory comments from a Structural Engineer or Chartered Building Surveyor prior to when the lending decision is ultimately made
- Is there ready demand and evidence of re-saleability within the locality? A little research will verify if similar properties have been sold. But also, bear in mind that cash purchasers and buyers who require a mortgage may have different experiences
- What condition is it now found in and has it been maintained? Research suggests, that in the Birmingham region alone, there are around 6,000 privately owned, defective house types still in occupation today so caution is required
- Check the roof space! This is often one of the easiest places to confirm the construction type. Measure the wall thicknesses too and take plenty of photos of key construction details – post inspection diagnosis is often easier with colleagues back in the office if you're unsure!

AIREY	SMITH
AYRSHIRE COUNTY	STENT
COUNCIL	STONECRETE
BLACKBURN ORLIT BOOT	TARRAN TEMPORARY
BEAUCRETE BOOT PIER	BUNGALOW
AND PANEL BOSWELL	TEE BEAM
CORNISH UNIT TYPE 1	ULSTER COTTAGE
CORNISH UNIT TYPE 2	UNDERDOWN
DORRAN	UNITROY
DYKE	UNITY TYPE 1
GREGORY	UNITY TYPE 2
MAC-GIRLING	WALLER
MYTON	WATES
NEWLAND	WESSEX
ORLIT	WHITSON-FAIRHURST
PARKINSON	WINGET
REEMA HOLLOW PANEL	WOOLAWAY
SCHINDLER	

Figure 9 – list of Designated Defective house types

Many potential buyers of such dwellings may find that further investigations are necessary to determine the condition of hidden components and structural integrity. It's therefore essential to seek professional, local expertise at the earliest opportunity.

About Ian Bullock Bsc (Hons) MRICS MEWI, Carpenter Surveyors

Ian Bullock is Managing Director of Carpenter Surveyors, a Midlands based Chartered Surveying practice established for over 30 years, specialising in the provision of Residential Survey and Valuation services to both private individuals and financial institutions.





CARBON MONOXIDE

THE SILENT KILLER

ANDY FLOOK, BUSINESS DEVELOPMENT DIRECTOR, SAVA
SAVA TECHNICAL TEAM

Carbon monoxide is tasteless, odourless and colourless, but it can cause danger and even kill. In recent news it has been reported that footballer Emiliano Sala, who tragically died when the plane he and pilot David Ibbotson were on crashed whilst flying over the Channel Islands, had high levels of carbon monoxide in his blood after toxicology tests were carried out. Experts suggest it is likely he was unconscious before the plane crashed, and it is likely pilot David, whose body has not yet been found, was also exposed to high levels of the toxic gas. In this article, we will review the dangers of carbon monoxide, what appliances in our homes could potentially pose a risk, and the relevant building regulations

An overview

Carbon monoxide (CO) is produced from partial oxidation of carbon containing compounds, including when fuels such as wood, coal, oil or natural gas are burned. It is present in the air around us because of the activities we carry out such as driving or for heating or cooking and even from smoking. Out in the open air, the level of CO is less concentrated and therefore not as dangerous, but high, concentrated levels in enclosed spaces pose a dangerous risk to humans and animals.

When inhaled, carbon monoxide will attach itself to the molecule (haemoglobin) that usually carries oxygen to our

blood and vital organs - the more CO that is inhaled, the bigger the build-up of CO and the more we are deprived of oxygen, resulting in asphyxiation which can lead to unconsciousness and even death.

According to the National Office of Statistics, in 2017 there were 59 deaths in the UK due to accidental carbon monoxide poisoning. This is an increase compared to 49 in 2016 and 53 in 2015.

Symptoms of CO poisoning can include:

- Tension-type or dull headache (common in mild cases)

- Dizziness
- Feeling and being sick
- Tiredness and confusion
- Stomach pain
- Shortness of breath and difficulty breathing
- Blurred vision

CO dangers in the home

As we burn fuels in our homes, there are appliances that could pose a risk to occupants. In our previous technical bulletin, we included an article on dangerous gas appliances and how to identify them which you may find useful ([read here](#)). Boilers, gas and solid fuel fires, woodstoves, gas or kerosene heaters, water heaters, gas or charcoal stoves or grills or gas tumble dryers could potentially have a carbon monoxide leak and therefore could be a danger in the home. Tell-tale signs that an appliance is faulty are:

- A yellow/orange colour flame as opposed to a crisp blue flame
- Soot or yellow/brown stains around the appliance
- Flickering or frequently blowing out pilot lights
- Condensation on windows (a higher amount than usual)

Regulations and requirements

As professionals in the property industry, we have a duty of care to tenants and owners of the properties we inspect. It is, therefore, important to understand the laws and regulations around health and safety requirements to ensure the correct information is shared to those who may be at potential risk.

Building Regulations

Carbon monoxide is considered in Part F (ventilation) and Part J (combustion appliances and fuel storage systems) of the Building Regulations.

Part F lists the performance criteria for buildings which includes the levels that exposure to carbon monoxide should not be exceeded – see figure 1.

Exposure to the following levels of carbon monoxide should not be exceeded:

- 100 mg/m³ (90 ppm) - 15 minute averaging time (DOH, 2004)
- 60 mg/m³ (50 ppm) - 30 minute averaging time (DOH, 2004)
- 30 mg/m³ (25 ppm) - 1 hour averaging time (DOH, 2004)
- 10 mg/m³ (10 ppm) - 8 hours averaging time (DOH, 2004).

Figure 1

In Part J, an addition was made in 2010 to include a new requirement, “Warning of release of carbon monoxide”, which states, “Where a fixed combustion appliance is provided, appropriate provision shall be made to detect and give warning of the release of carbon monoxide.” It’s noted that whilst carbon monoxide alarms are required for solid fuel appliances, alarms can still reduce the risk of poisoning from other types of appliance.

Requirements of Gas Safe professionals

Appropriately qualified professionals in the industry are also required to follow various legislation such as [The Gas](#)

[Safety \(Installation and Use\) Regulations](#) and the [Gas industry unsafe situations procedure](#), which we touched on in our previous article. The latter is a useful document in terms of referencing and advising on appropriate actions when faced with potential carbon monoxide poisoning. Incidentally, regardless of whether you are a Gas Safe professional or not, in the event that you are faced with a situation which you suspect may be creating spillage of the products of combustion into a living area, then you should immediately cut off the gas supply from the emergency control (with the occupier’s permission), evacuate the premises immediately to a safe, open-air environment and inform the gas transporter on 0800 111 999.

Landlords

When renting out properties, landlords need to ensure they meet the minimum requirements. They must ensure gas appliances are in a safe condition, fitted or repaired by a Gas Safe engineer and checked every 12 months by a Gas Safe registered engineer. This includes pipework, boilers, fires and water heaters as well as cookers. Whilst tenants are responsible for any gas appliances they own, the landlord will be responsible for any flues, pipework or the chimney they may be connected to. The landlord is responsible for installing carbon monoxide detectors in rooms with a coal fire or wood burning stove at the start of the tenancy. Following this, the tenant is responsible for checking they are working after the tenancy has started and must notify the landlord if they stop working, who will then arrange for replacement batteries or a new detector.

Surveyors

For a condition survey, surveyors are required to report on heating and the gas supply if applicable, so surveyors should become familiar with the requirements necessary to report appropriately within the limits of the survey type commissioned.

If the surveyor has not seen and taken evidence of a recent gas safety certificate for the property, the gas should automatically be given a condition rating 3, advising the client that a recent gas safety certificate should be obtained by an appropriately qualified professional to ensure the gas appliances are safe.

With regards to carbon monoxide alarms, although it is not a mandatory requirement to have a carbon monoxide detector where gas appliances are present, it is recommended. It would, therefore, be advisable to include in the survey if no carbon monoxide detectors could be seen during the inspection. You should also be aware of the British Standards which relate to installed CO detectors:

BS EN 50292:2013 states that carbon monoxide alarms should be:

- Placed in the same room as fuel-burning appliances (either wall or ceiling mounted), such as an open fire, gas cooker or boiler
- Fitted in rooms where people spend the most time, such as living rooms
- Located in bedrooms in addition to the above, relatively close to the breathing zone of the occupants
- Fitted in any room that has a flue running through it
- Placed at least 300mm from any wall (for ceiling mounted alarms)

- Placed at least 150mm from the ceiling, above the height of any door or window (for wall mounted alarms)
- Between 1 and 3m (measured horizontally) from the potential source of CO

The British Standard EN 50292 also recommends that an alarm is not fitted:

- Where it can be obstructed
- In an enclosed space
- Directly above a sink
- Next to a door, window, extractor fan, air vent or similar ventilation opening

Here are some examples showing appliances with signs of spillage of the products of combustion:



Figure 1 – signs of spillage on the fireplace mantle



Figure 2 – signs of spillage above the open fireplace

In 2006 a 14-year-old girl from Cwmbran in Wales and the family dog tragically died following the installation of a flueless gas fire. The installation was carried out by a CORGI-registered engineer; however, he was not appropriately qualified to install that particular appliance. The court heard that the engineer failed to check that the gas pressure on the appliance was set to the correct level, resulting in a leak. Two days

after the appliance was installed, the teenager’s mother returned home from work and found their dog had died in the hallway and her daughter had died in her bedroom. Both deaths were the result of carbon monoxide poisoning.



Figure 3 – signs of spillage above the open fireplace

To take away

Although carbon monoxide detectors are not required by law for every property, there still seems to be a lack of awareness from the public about the potential danger carbon monoxide can bring, and how it can become present in a property. If a carbon monoxide detector is not present, there is no harm in bringing this to the occupier or future occupier’s attention and, of course, appropriate advice should be given regarding gas safety checks. We strongly feel that any professional working in the property industry must not only understand the requirements but also the dangers of carbon monoxide poisoning and how tragedies such as the case mentioned can be avoided by following simple steps, relaying the appropriate information and educating those around us.

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James Ginley FRICS, Technical Director, Legal & General Surveying Services



SAP 10

CHANGES TO LIGHTING

DR LISA BLAKE TECHNICAL MANAGER, SAVA

If you're a regular reader of our technical bulletins, you'll know that in our last two issues we looked at two of the methodological changes expected in the next version of SAP: hot water calculations and heating patterns. In this issue, we will take a closer look at another change to the methodology, which is the lighting calculations.

As homes become more energy efficient due to insulation and air tightness, much like hot water algorithms, lighting will account for a higher percentage of energy use, therefore, the calculations for lighting need to be more sophisticated to accurately model the energy used. The calculations also need to be updated to allow for new lighting technologies.

SAP 2012

The current method of calculating the lighting requirement is quite simplistic. The floor area is used to calculate a

base energy requirement for lighting based on Tungsten lights. This energy is then adjusted for the proportion of low energy lights present, such as LED or CFL lights. This energy requirement is then adjusted for the daylighting which is based on the size, type and orientation of the windows present. In RdSAP, the window area is normally assumed with the orientation calculated using East.

Currently SAP 2012 does not differentiate between different types of low energy lights or consider excessive or insufficient lighting.



Figure 1 - how lighting is calculated in SAP 2012

SAP 10

The calculation for lighting in SAP 10 is more complex, as you can see from figure 2 below.

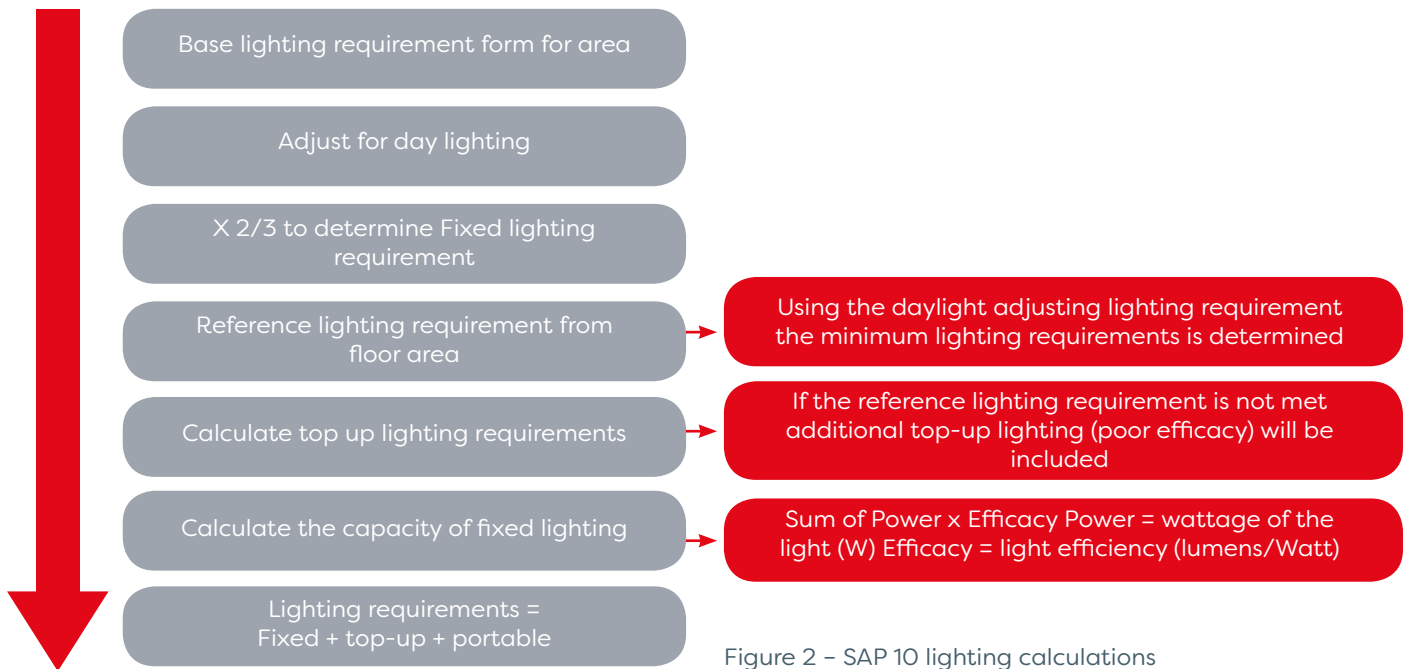


Figure 2 – SAP 10 lighting calculations

In the same way as SAP 2012, the floor area is used to calculate the base energy requirement along with an adjustment for daylighting and the fixed lighting requirement is then calculated. However, in SAP 10, a similar approach to passing Part L is taken and the actual situation is compared to a reference situation. If more lighting capacity is provided than the top of the reference range, the surplus will be used in the calculation of energy use (using the actual efficacy), thereby making sure properties designed with excessive lighting have the additional energy use taken into account.

The SAP 10 default efficacy for different types of lamps is shown below which demonstrates the amount of visible light per Watt. The most efficient lamp is the linear fluorescent as it achieves the highest amount of light per unit of energy. These lamps are commonly found in offices and kitchens.

 Incandescent 11.2 lumens/Watt	 Halogen 15.7 lumens/Watt
 Halogen low voltage 26.1 lumens/Watt	 LED/CFL 66.9 lumens/Watt
 Linear fluorescent 80.5 lumens/Watt	

At present, we are not aware of what a domestic energy assessor would be expected to collect exactly, but they would still be required to count the number of fixed lighting outlets and they should be able to differentiate between low energy light types, rather than just low energy and non-low energy. What should also be noted is that the current conventions require a DEA to divide the total number of downlighters by 2, but this would not be necessary as, instead, the total power of lights will be calculated.

Example

Let's use a 100m² house with 50% low energy lights as an example. Using SAP 2012, the calculation would result in 600kWh per year, but using SAP 10, 50% incandescent and 50% LED results in 510 kWh per year meaning a 15% reduction in energy for lighting.

The impact?

For existing dwellings, these changes in methodology are unlikely to have a huge impact on the SAP rating; however, as mentioned earlier, now that homes are becoming better insulated and more energy efficient, lighting will account for a higher share of the energy used in our homes, so a more accurate calculation is a welcome change.

Remember, SAP 10 will not be adopted until there is an update to the Building Regulations and it has been refined. Once SAP 10 is refined, it will first be used for new-build properties for around 6 months, then it will be used in RdSAP for existing dwellings.

