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The insurability of modern methods of construction

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The insurability of MMC

The potential of modern methods of construction (MMC) to revolutionise the construction industry is well documented. Construction companies are increasingly using these MMC techniques and we can only see this trend continuing as the industry embarks on the quest for greater sustainability. However, uptake could be hindered in the UK by insurance companies’ risk appetites.

This is despite the advantages of MMC, including: reduced construction costs, increased productivity, improved health and safety, and enhanced environmental, social, and governance (ESG) performance.

The public sector is leading the way, with procurement and adoption on projects due to the issue of the UK government’s Construction Playbook. In order to reap the rewards of MMC — and bring comfort to insurers — UK contractors and developers should carefully consider the following factors when embarking on a project involving MMC techniques.

HOW INSURABLE IS MMC?

MMC is a wide term, covering a range of offsite manufacturing and onsite techniques. MMC has been split into seven categories by the UK government's Department for Levelling Up, Housing and Communities as follows:

Category 1

Volumetric modular, i.e. 3D primary structural systems.

Category 2

Panelised systems in 2D, i.e. cross laminated timber panels, cold formed steel panels, timber cassette panels.

Category 3

Mass timber structural elements (glulam, laminated veneer timber), steel, precast concrete elements.

Category 4

3D printing of structural/non-structural elements.

Category 5

Bathroom/kitchen pods, mechanical and electrical assemblies, cladding systems.

Category 6

Large format cladding systems.

Category 7

Sacrificial temporary works, use of BIM, site robotics.

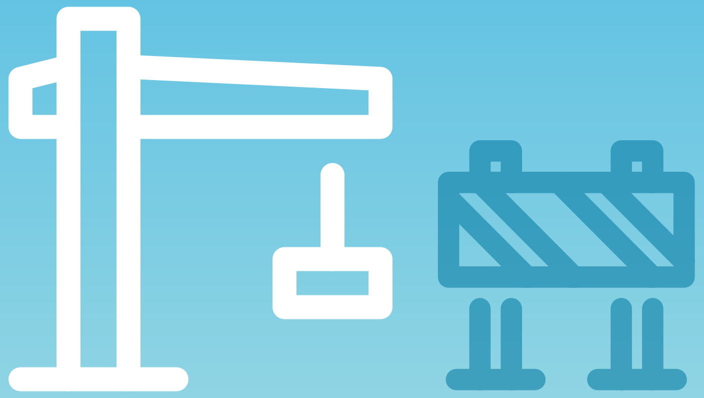
Projects incorporating these features are more challenging to insure, especially in a tougher market. This is exacerbated by the fact that the UK has been slower to adopt MMC than other countries, meaning UK construction insurers have a more limited experience of it.

This has resulted in a cautious, conservative approach to underwriting projects utilising modern methods. Yet, the increasing prevalence of such techniques in the construction industry means there is an expectation for insurers to offer greater collaboration and better understanding to generate comfort with insuring such risks, in the absence of years of data.

STATE OF THE CONSTRUCTION INSURANCE MARKET

In 2018, construction insurance started transitioning firmly out of a soft market globally, due to a series of major losses and an unprecedented number of carriers withdrawing from underwriting construction business.

Rates increased, and capacity reduced, as did insurers' risk appetites. At the same time, policy wordings tightened, and exclusions widened. During the past year, however, the market has stabilised in certain areas. For the right type of risk, there is some moderation in terms of price rises.



HOW MMC RISKS ARE PLACED WITH CONSTRUCTION INSURANCE COMPANIES

There is no specific split between markets that will consider MMC and those that will not. However, there are varying appetites across the MMC spectrum. For example, some markets will consider CLT and/or timber elements, while others will not entertain them at all, even if such elements represent only a small proportion of the estimated contract value.

Potential markets will require detailed information on the:

- Contractor's experience of dealing with MMC.
- Quality assurance (QA) and quality control (QC) procedures in place with the manufacturer (access to the production facility could be requested).
- Contract agreed between the contractor and supplier, and the risk allocation between both. For example, at what point does the risk for the manufacturer end and the risk for the contractor begin? And who takes responsibility for the risks undertaken during transit of the modular items?
- Laydown and offsite storage plans, in order to assess accumulation risks. For example, if a series of bathroom pods have been moved to a site, but the site is not ready to receive them, adequate storage will have to be found for the pods in order to prevent exposure to weather damage.

Ultimately, construction firms and their brokers will need to accurately demonstrate to insurers that the benefits in the project utilising modern methods of construction significantly outweigh the inherent additional risks, such as QA and QC, transit risks, series loss risk, supply chain concerns, and the ability to rectify and investigate damage on site.

THE BENEFITS AND CHALLENGES OF PLACING MMC RISKS

The risk benefits of MMC compared to more traditional construction methods/materials are manifold. One example is the reduced manpower required on site. This creates a better health and safety environment, with a lower chance of accidents as less hot works are being engaged in, along with reduced amounts of working from height. With many of the building elements being manufactured indoors, there are fewer delays as a result of the weather, and a shorter natural perils exposure on site.

The potentially shorter build periods can make the risks more attractive to insurers, meaning additional markets could enter the space, wanting to provide capacity. The homogeneous nature of the risk can assist in the underwriting process and defining of terms and conditions.

All of the above will assist in demonstrating benefits to markets and could result in potentially improved terms from insurers. But they will also lead to increased information requirements from insurers, who will want to see them documented and supported in the underwriting presentation.

Placement challenges include the need for clear policy language in deductible application, the definition of offsite storage and manufacture, and of who has risk of loss during the manufacture, delivery, fabrication, and on-site erection.

Clients should also be aware that if government legislation leads to changes — for example, to the design of a building mid-project — this could lead to challenging delays, estimated contract value increases, and period extensions to projects.

COVERAGE CONSIDERATIONS FOR CONSTRUCTION PROJECTS UTILISING MMC

Construction policies generally cover the onsite risk, including offsite storage, and inland transit risks. Modular units are covered under a manufacturer’s policy during fabrication. However, with likely higher cover values required during the inland transit phase, and, in some cases, offsite storage, there needs to be clear understanding from all parties as to where the manufacturing, transit, and contractor’s all risks (CAR) policies incept and cease, in order to avoid confusion in the event of damage. It is possible that CAR insurers might not wish to cover higher storage and transit exposures under the CAR policy, meaning separate cargo/transit coverage may need to be sought.

In terms of design, the uniformity of modular building brings an increased inherent defects risk. For example, if a module is the second of 15 that have been installed, and is found to have a design fault, the contractor might have to strip out all 15 modules to eliminate repetition of the same fault.

Further, insurance issues could arise if there is an inherent defect in a whole series of modules. If the project insurance contains a series loss clause, there could be the potential for limitation of cover. Professional indemnity risks should also be considered, and the limit of indemnity considered in the context of MMC risk exposures.

Questions related to design issues are complex. For a more detailed discussion about the benefits and challenges surrounding MMC, including those related to design, contractors and developers should seek the advice of a specialist construction insurance broker.

COVERING RISK IN THE OPERATIONAL PHASE

The transition of insurance from the construction to the operational phase is a major concern for real estate insurers, because all the risks presented by an MMC build will be passed on to them.

Real estate underwriters have to provide coverage for a longer period — the whole life of the building — than construction insurers, who only deal with the build phase, meaning cover for projects incorporating MMC risks will be harder to place during the operational phase.

Real estate insurers have minimal experience of MMC; some have seen small, completed developments, and there have been a few speculative developments. In general, insurers are more wary of MMC risks than those associated with standard materials and processes.

MMC projects built with flammable materials are less preferable to insure than those built using more standard materials. There is insufficient data both in relation to claims, and around the performance of MMC-related projects, as little independent testing has been carried out. Modern methods of construction risks will be viewed as strictly accommodation business , meaning insurers will not write it stand alone. Any terms provided will be seen as a favour, as their appetite for MMC is extremely low given the increased flammability of the material.

A number of issues are presented by MMC buildings

Resistance to fire, particularly for CLT (including the potential delamination risk).

Lack of real world data on how MMC buildings fare in fire and large escape of water situations.

Impact of escape of water losses on repair costs.

Lack of insurance data.

Therefore, it is very difficult to make judgements — positive or negative — based on one risk. Real estate insurers lag about two years behind construction insurers in terms of their experience with MMC risks.

The two MMC elements that real estate insurers have most experience with are CLT, and room pods, such as kitchen or bathroom pods.

Despite their sustainability benefits, CLT projects are relatively rare in the UK, due to their perceived combustibility. Construction underwriters are cautious in their dealings with timber, and real estate insurers even more so, as they have limited detail about how the risks respond in a fire. As a result, the ratings are much higher, and there are higher deductibles.

Capacity is a significant issue too. Capacity is limited on an estimated maximum loss (EML) basis, but insurers would regard everything as 100% EML. A large insurer that has £250 million-plus capacity is limited to £15 million for modern methods of construction. Capacity for MMC is extremely limited in the real estate market.

Any cover given for a modern MMC building is likely to be minimal capacity — akin to waste risks — unless there are good reasons to exceed this. Water is seen as another risk alongside fire. Insurers are asking how escaping water, or, should a fire occur, water from sprinkler systems, would affect the surrounding timber, and its ability to do its job.

Furthermore, insurers are asking how easy it would be to address problems, an escape of water, for example, in a complex item such as a bathroom or kitchen pod.

Reinsurers will not usually write insurance for CLT and pods, so insurers have to take on the risk themselves. The amount of MMC used in a project has a bearing on insurer perceptions; we have seen one project become virtually uninsurable due to its wood cladding. Clients are working to remedy the issue of these emerging risks by introducing experts to engage with insurers and brief them about how such risks are being managed.

During the pre-construction phase, it is suggested that a discussion with the client and insurer/s is set up to outline the design, and discuss how it could lead to potential future insurance issues. Contractors should also be aware of how the mitigation of operational risks could fall to them, if they are acting as a developer.

In summary, real estate insurers' stance on MMC is that it is generally regarded as out-of-appetite business. If a property utilising this type of construction is presented to them on a standalone basis, they would likely decline it. If presented as part of a larger/existing portfolio, they would need to consider all the relevant underwriting features in order to establish capacity, pricing, and terms and conditions.

MMC CLAIMS LANDSCAPE

There have been a relatively small number of claims related to MMC, but they are expected to increase as new materials and processes become more popular.

Many claims, for example, those related to a failed water joint or an electrical fire, will not be specific to modern methods and will be dealt with in the traditional way. However, modular building brings implications around the DE4, or defects, exclusion in a policy. DE4 wording usually states that if a defect causes damage to insured contract works, the insurance policy will pay for the damage, but won't replace the defective part or component.

For example, if a valve failed and caused flooding when a bathroom pod was connected to a water supply, under DE4, the entire pod could be regarded as the defective element, and would therefore be excluded. In a traditional build, the valve alone would be seen as the faulty component.

In this case, wordings need to be carefully examined, and a counter-clause added for the purposes of DE4, stating that the bathroom or kitchen pod is not regarded as a whole item, so is therefore not excluded.

Waiting times could present another claims issue. If a number of pods are damaged, say, by escape of water, the contractor might have issues scheduling time for the manufacture of new units. If suppliers are booked up months in advance, the construction company might have to resort to standard methods of construction to replace the pods.

KEY ACTIONS TO TAKE

Placing insurance for projects using MMC is by no means impossible, and insurer capacity and appetite vary according to the method or material used, and the risks involved. In order to obtain optimum terms, clients are advised to allow time to navigate the risk transfer process, including allocating increased lead times to risk management and insurer marketing plans to ensure they are as coordinated, methodical, and meticulous as possible.

Engaging with a construction insurance broker early in the process is crucial when preparing information and building a marketing strategy. Their extensive market knowledge, trusted business relationships, and experience will usually be invaluable during the current challenging period of market conditions.

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