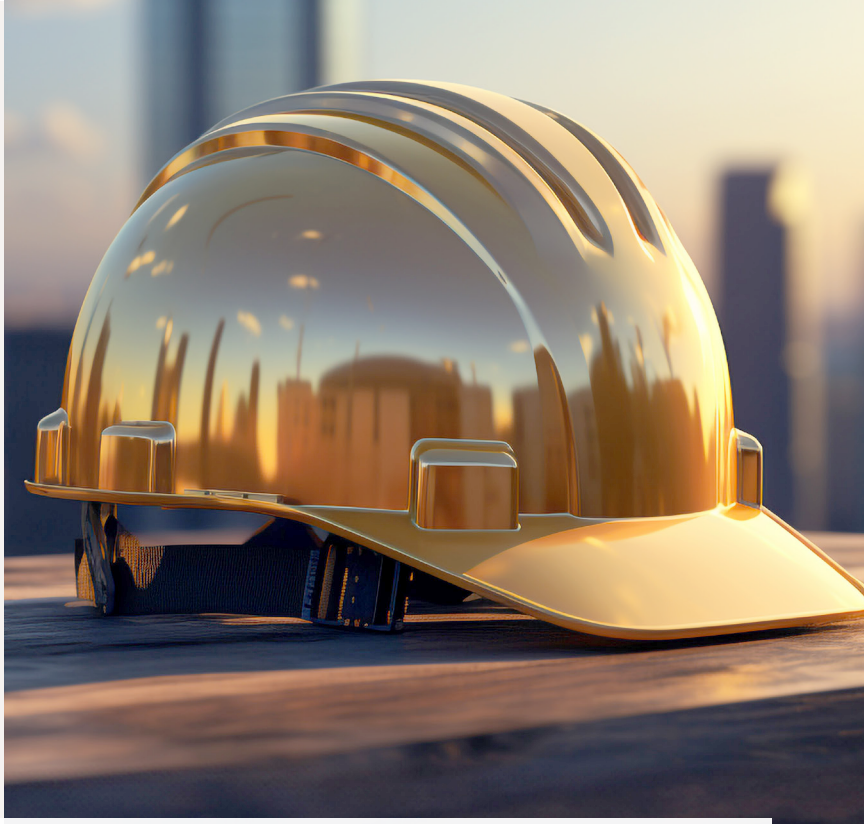
GRS Complex Claims SOLUTIONS

# The Crystal Ball

*– Looking at Construction in 2024 and Beyond*



In this article we will explore a few areas in the Construction arena where we may see new technologies replacing traditional concepts in addition to other factors which will affect the industry over the next 12 months and beyond.

## Inflation

Inflation has been a significant concern in the construction industry now for a while, be that for Developers, Contractors or Insurers. A perfect storm of factors such as more complex import restrictions, labour scarcity, material shortages together with Geo political aspects has meant that prices have been increasing at a significant pace over the last few years. This has ultimately resulted in a decline in construction activity, with contractors profit margins being squeezed. An example of this is house building activity, which has seen a decline during 2023 for ten months in succession.

The outlook however for 2024 is more promising. Material costs have started to stabilise; for example timber and steel costs reducing over the last quarter of 2023; this may be a trend we continue to see in 2024.

The impact of inflation and the direct increase in claims costs in the construction area has also been a concern for both underwriters and claims professionals. As Loss Adjusters we have seen rates for repairs increase in comparison with original contract rates (primarily due to increased costs in materials and labour) resulting in higher final claims costs, then perhaps originally envisaged by Underwriters. Supply chain problems have also contributed to delays meaning projects have finished late following an indemnifiable incident with resulting DSU implications. This will no doubt be factored in at renewal in some circumstances, resulting in potentially higher insurance premiums. Labour is a key factor in this regard; the industry will have to invest in training domestically (possibly through apprenticeships) if this trend is to be reversed or through the use of technology which will be discussed.

## Insolvencies

The last 12 months have seen an increase in the number of construction related insolvencies. As an example during September 2023, 16.9% of all insolvencies were in the Construction sector. There are a number of reasons for this:

- The higher cost of financing
- Increasing material costs
- Increased labour costs
- Increasing energy costs
- Repayment of Covid loans
- A hangover of fixed priced contracts which have now become uneconomic

When a Contractor becomes insolvent, the implications for any given project are immense. For this reason any developer/main contractor needs to fully understand the supply chain arrangements associated with the contractor and implement or at least consider measures to mitigate the difficulties that arise. This could include understanding the cash flow position of any contractor, the supply chain, whether the contractors works are critical to the delivery of the project, and if other contractors can be brought in with similar skillsets at short notice.

Any prudent Developer or Main Contractor should therefore carry out some due diligence on any contractor/package to fully understand the risks associated with an insolvency and what actions could be implemented in the event that the contractor does become insolvent.

From a claims perspective the writer has had firsthand experience with a large contractor going into administration during a project. This resulted in the developer temporarily delaying the project until alternative arrangements could be made. This in turn will have resulted in increased finance costs, which will be significant.

Thought also has to be given to the Insurance arrangements where Option A (insurance option in the JCT suite of contracts) has been elected, as the administrator or Insurer may cancel any policy in this scenario. There are options available in these circumstances which will be discussed below. There will also be latent defects considerations to consider.

In the final analysis if a contractor becomes insolvent during a project, there will be many aspects to consider, such as delays to the project, the appointment of a new contractor with likely increased costs, the effect on the insurance programmes and the like.

It is therefore vital that stakeholders do give this aspect some thought in an era when insolvencies are on the increase.

## Robotics

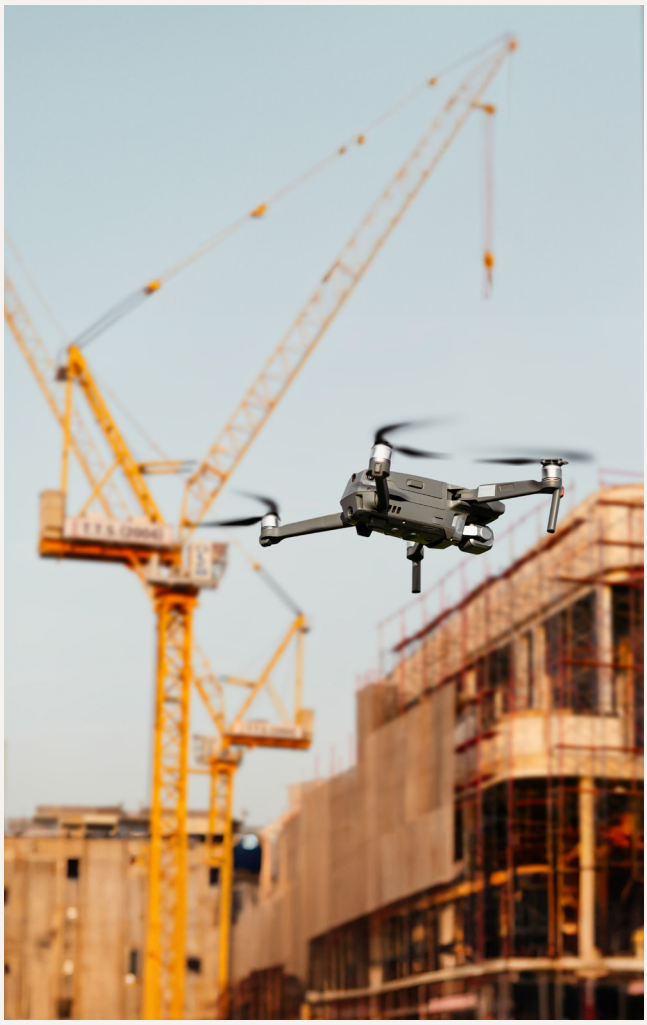
It is likely that the use of robotics will become more common in the industry. This will be primarily driven by labour shortages and rising costs. Robotics in the construction industry could potentially include drones, 3D printers (discussed below) self-propelled vehicles, mixers, bricklaying, painting and rebar tying. Where tasks are in the main repetitive, then the use of robotics can be very valuable and cost effective.

The use of robotics can also be advantageous from a health and safety perspective, protecting workers from hazardous working environments.

It is certainly the case that one large contractor has embraced the principle of robotics and has worked with manufacturers to develop autonomous robots for various tasks. Software has also been designed to program the robotic equipment meaning that the human element has almost been removed. In addition some robotic equipment can be employed remotely which brings further advantages in terms of cost savings.

According to one research institute the market for robotic equipment will grow from $22.7 million in 2018 to $226 million by 2025.

The use of robotics will raise questions for Insurers in terms of the risk profile. In the event of a defect



(or damage) in a product for example, does the risk rest with the robotic supplier, the remote operator, the software provider (AI) or manufacturer? Thought will also be required in relation to quality control and how this is monitored. (In theory the quality control should be less of a concern given there should be greater consistency in any product).

Insurers will also need to understand how any repair may be undertaken in the event of damage to works completed by a robotic procedure and whether any repair has to be undertaken by the same process or manually at an increased cost. This will become clearer as and when the use of robotics is more common.

## 3D Printing

It is likely that 3D printing (also known as additive manufacturing) will be a more common occurrence on construction projects in the coming years. This is potentially one method of countering the labour shortage discussed above. The advantages of this type of construction include faster production/delivery times, less waste, more use of recycled materials and cost savings.

It has been demonstrated that 3D printing can be used to build entire buildings, albeit the technology is still in its infancy. There is still only a handful of completed buildings globally using this form of construction. 3D printers are still costly with machines ranging between GBP 150,000.00 and GBP 750,000.00. As a consequence, for this technology to be widely implemented (for example in the residential house building market) developers will need to invest heavily in the technology for it to be a viable alternative. There will also need to be a "structural" (forgive the pun) mind shift for any potential purchaser, as it will need to be demonstrated that this method of construction provides all the longevity and robustness of a traditional build process. In addition, potential buyers will need some comfort that the monetary value of this type of build (over the long term) will be comparable to traditional builds.

As and when the industry onboards this method of construction on a wider scale, we will also need to carefully consider the insurance implications. Initially the data will be limited in respect of the longevity of this type of build (a typical concrete structure will have a service life of between 50 to 100 years).

Therefore until data is widely available for 3D printed structures, Insurers may see an increased inherent risk both in the construction phase and then for the ongoing repair costs aspect once the building is occupied and subject to the normal risks of occupation. Due consideration will also need to be given to the cost of re-construction in the event of a total loss or partial repair of the building. These aspects will only crystalise as more construction of this type is undertaken and embraced and there is data to review.

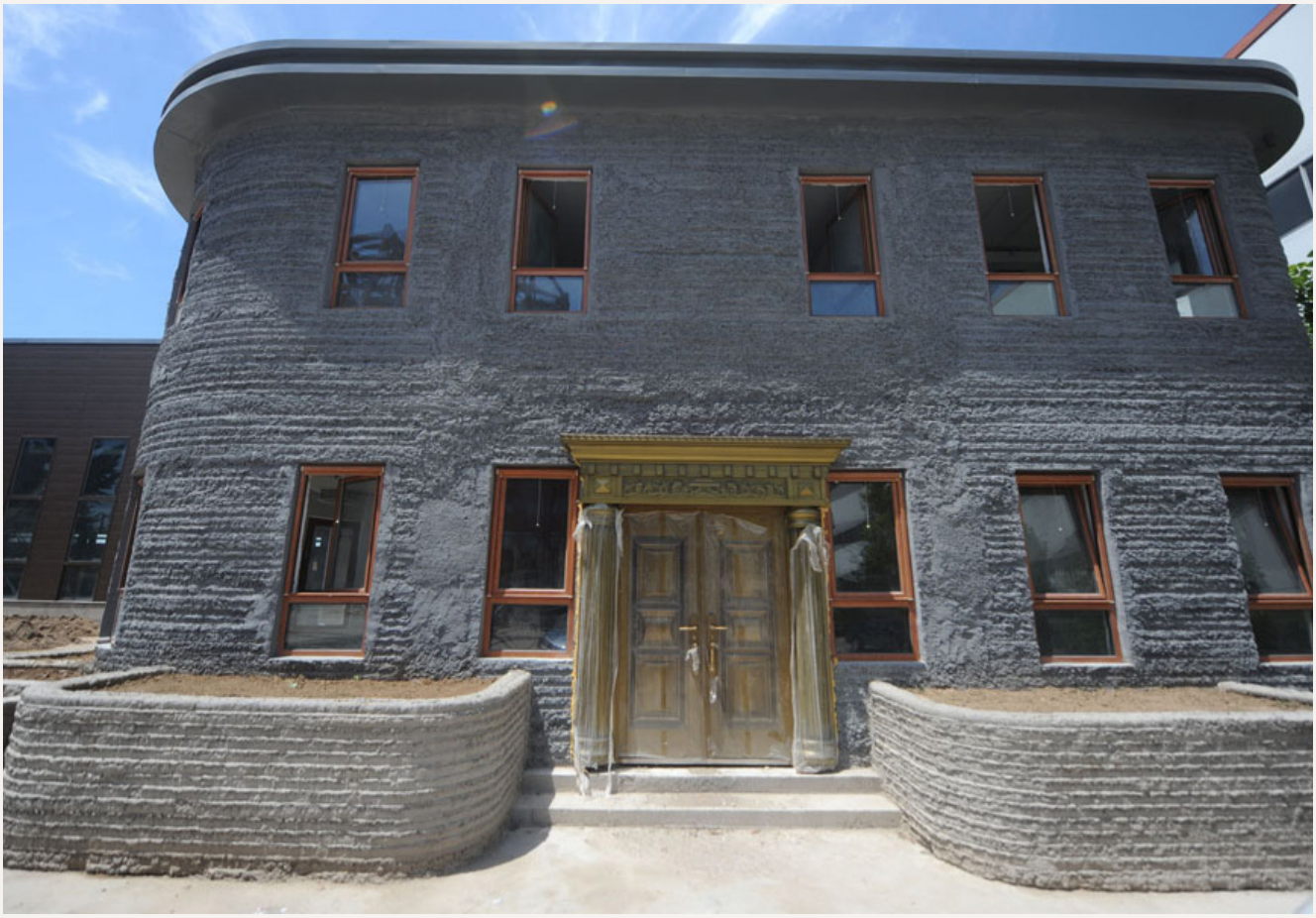


*Figure 1: A 3D residential dwelling – (Source China Daily)*

## Artificial Intelligence (AI)

The use of AI in the construction industry remains to be seen at this juncture. However the potential applications are limitless if one considers that AI will seek to replicate and improve on human cognitive behaviours.

Possible applications for AI could for example include labour resourcing applications where AI is used for labour distribution, specifically for different trades. We discussed the use of robotics and printers above; these will be programmed using AI either to build sections of buildings or components which can then be assembled to build larger structures.

AI could also be potentially used for design applications, cost planning, risk management, health and safety at site. Another key component of AI will be the capture of data. Every contract site will become a data pool which will refine the AI algorithms, thereby enhancing the outcomes over time. The possibilities are endless. It remains to be seen what impact AI will also have on the services industry generally. The insurance risk considerations could also be significant. When AI is wrong who is responsible?

Some policies may also have an electronic data exclusion and it may be this excludes any AI implications. Underwriters may also need to give this particular aspect further consideration.

## Conclusions

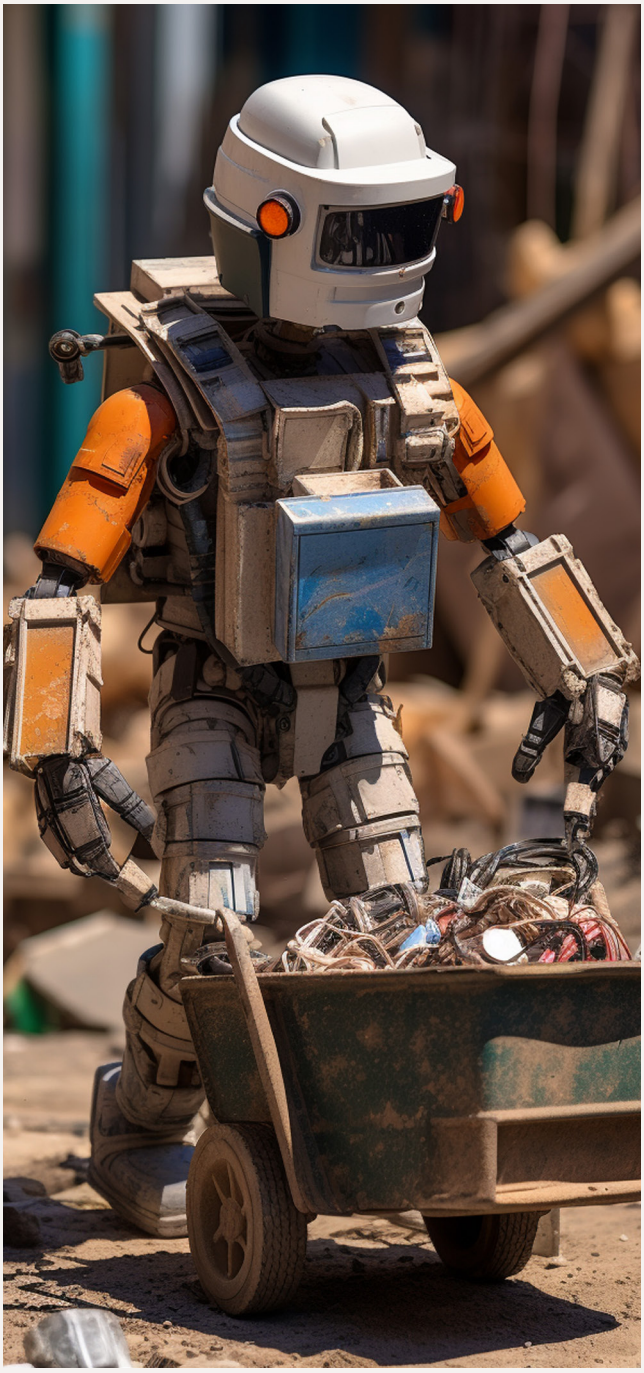
With inflation now potentially declining, there is confidence in the industry, that 2024 will be more positive than the preceding year. If and when Interest rates fall and financing is less restrictive, then the appetite among stakeholders to invest and build will grow.

In the UK the two main pinch points for construction have been labour and material costs. It is possible, as discussed above that technology will be used to overcome these pinch points.

In terms of insolvencies the market has responded with bespoke products to try and minimise the impact of insolvencies particularly for developers where option A was elected in the contractual matrix. There are now Insurance products which can assist any developer in this particular scenario. (more information can be provided on request).

If some of the new technologies are embraced by the construction industry, Insurers will also be facing a new profile of risks, which will need to be carefully considered in terms of their underwriting and exposure.

Finally, the industry is not immune from wider events such as the Ukraine/Russia war. At this time it remains to be seen whether the difficulties in the Red Sea area will have an impact on the industry in the months to come.



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