Innovation in construction – when am I liable and for how much?

Hsu Mei O'Neill of **Watson Farley & Williams LLP** discusses the impact of innovative technology and materials on construction as the industry strives to improve efficiency and its sustainability performance. New technology brings new risks, she warns.

KEY POINTS

- The drive behind environmental sustainability and need for efficiency increases the use of innovative technology and materials in the construction industry.
- New technology exposes contractors to the risks linked to a lack of industry standards and experience.
- Under English law, a fitness for purpose clause could be implied, depending on how objectively apparent the purpose of the structure is.
- Where there were different standards imposed in the contract, the more rigorous prevail.
- The requirement to use reasonable skill and care is usually an express contractual term but where not expressly stated, it will be implied.

Innovation in Construction – greater uncertainty

With the focus on environmental sustainability and the drive towards efficiency, the need to innovate and harness new technologies and materials in construction is greater than ever before. To meet these needs, construction professionals and specialist contractors have increasingly been required or are choosing to deploy innovative technology, be it new techniques, designs or materials in commercial construction projects.

However, in contrast to the use of conventional methods and materials, new technology will usually mean:

- there are no established industry standards governing the use of the new technology and the technology itself; and
- there may risks which may only manifest or be understood in the future.

This article examines how the English law of contract and tort will address and assess liability arising from the use of new technology in construction referencing recent important developments.

Considerations applicable to the use of new technology

In ***Victoria University of Manchester v Hugh Wilson & Lewis Womersley and Pochin (Contractors) Ltd (1984) 2 Con LR 43,*** the court noted:

> "For architects to use untried, or relatively untried, materials or techniques cannot in itself be wrong, as otherwise the construction industry can never make any progress. I think, however, that architects venturing into the untried or little tested would be wise to warn their clients specifically of what they are doing and to obtain their express approval."

This would mean that when deploying new technology, a contractor may be able to discharge their responsibility by issuing a sufficient warning regarding potential risks and obtaining employer's express approval to use the new technology. Usually, neither would have absolve a contractor of their liability for defective works.

Otherwise, there is no exception within English

law which applies to new technology.

Technical requirements and fitness for purpose

The starting point for determining the scope of the contractor's responsibility and duty is the contract with the employer. The contract will usually establish contractual duties and performance standards, including any detailed technical specifications.

However, where contractual works involve deployment of previously unused new technology, there may not be clear industry standards available. Instead, the contractor needs to ensure that the structure achieves the ultimate purpose the employer intended it for i.e. fitness for purpose.

The "fitness for purpose" principle is codified in section 14(3) of the *Sale of Goods Act 1979*. In the construction context, the duty to ensure fitness for purpose is the duty that a particular structure is fit for its intended purpose. A fitness for purpose clause could be implied if it is not an express contractual term, depending on how objectively apparent the purpose of the structure is. For instance, in residential buildings must be fit for human habitation.

In ***MT Hojgaard AS v E.ON Climate and Renewables UK Robin Rigg East Ltd and Another [2017] UKSC 59***, which was a dispute about foundation structures of two offshore wind farms, the contract included a general obligation that "the Works as a whole shall be … fit for its purpose as determined in accordance with the specification using good industry practice" and a technical requirement which stated that the design of the foundations shall "ensure lifetime of 20 years in every aspect without planned replacement". Fitness for purpose was defined to be "in accordance with, and as can properly be inferred from the Employer's Requirements".

The Supreme Court found that while foundation structures were built to the required specifications, they would not have met the criteria to have a lifetime of 20 years without maintenance. Although the was contractor was found not negligent, they were liable for the defective structures. It was further held that where there were different standards imposed in the contract, the more rigorous prevail. Also, where there is an inconsistency between a design requirement and a required criterion, the contractor is obliged to identify the issue and improve the design, even if the employer has specified/approved it.

Reasonable skill and care

It is also established law that specified requirements can set the scope of the contractor's contractual and non-contractual duties so that they can be read together as a single standard.

Lendlease Construction (Europe) Ltd v Aecom Ltd [2023] EWHC 2620 (TCC) concerned the construction of a new oncology centre where the mechanical and electrical design consultant was contractually required to use reasonable skill, care and diligence and to "observe the employer's requirements and the project agreement and to ensure that it did not place Lendlease in breach of the said agreements".

The court distinguished this case from ***Robin Rigg*** on the basis that the contractual provisions are "not readily to be seen as laying down competing requirements for a specified design and for specified performance criteria."

As there was an express contractual term providing that the consultant should not owe any greater duty than the use of reasonable skill, care and diligence, it was held that the specific requirements referred to in the contract were "setting the context in which the question of what is required in order to perform with reasonable care, skill and diligence is to be addressed" and that the requirements are to be "read as imposing a single standard."

This brings us to the contractor's duty to use reasonable care and skill in carrying out work. It is usually an express contractual term, but where this is not expressly stated, it will be implied into the contract under section 13 of the *Supply of Goods and Services Act 1982*.

Where a contractor is using new innovative technology/materials for which there is no substantial body of construction standard, the contractor will be assessed according to how an ordinarily competent member of that profession would have acted when using that new technology (Bolam test).

Where new information on efficacy/risks of innovative technology arises during/after a project, the current position is as follows:

- Without an express contractual term, the contractor is not expected to review any particular aspect of the work that they have already completed, unless the contractor has "good reason" to reconsider their original work.
- The Bolam test is then applied to determine what

constitutes a "good reason" referring to what a reasonably competent contractor in the same field would do in the circumstances.
- Where the contractor knows or ought to know (pursuant to the Bolam test) of the error, there may be a duty to review the earlier performance and advise the employer.

A contractor will always have contractual/non-contractual duties to fulfil. When there is substantial use of new technology, the contractor's non-contractual duties may become more significant.

Liability towards the employer and third parties

The question is, where a contractor is negligent, what are they liable for and for how long can claims be brought against them. A contractor would be liable for loss suffered by the employer due to the contractor's breach (personal injury, economic loss and physical damage).

However, construction professionals' liabilities towards third parties are subject to two constraints:

- construction professionals are generally not liable for economic loss suffered by third parties (unless they assumed responsibility to that third party); and
- the third party must have sufficient interest in the property.

Economic loss is usually represented by any diminution in value of the property/structure due to damage caused by the contractor's negligence/breach. Confusingly, defect remedial costs can also be deemed to be economic loss but this needs to be distinguished from financial loss following from physical damage. For example, if a construction professional's breach of duty causes a fire which spreads to a neighbour's house, that neighbour may recover costs of having to repair the damage and damages for the loss of use of the building.

Time limitation

Impact of statutory time bars could be significant where there is significant use of new technology, where defects have only manifested much later after project completion, and where there are no contractual time bars. While time bars cannot extinguish the claim, they limit the time within which a party can claim an entitlement.

The *Limitation Act 1980 i*mposes a six-year time bar for a claim to be brought (except for personal injury) after the date:

- when the breach of contract occurred; or
- on which the claimant has knowledge of damage, for breach of duty in tort.

However, special provisions apply where at the time the claimant's cause of action accrues, the claimant does not have knowledge of all material facts. In such a case, the limitation period is the latter of either:

- six years from when the cause of action accrued; or
- three years from the date when the claimant knows or ought to have known.

There is a 15-year long-stop date from the date of the defendant's negligent act or omission.

Where there are mistakes, the limitation period does not start running until the claimant has discovered the mistake or could with reasonable diligence have discovered it.

Regarding defects recurring after remedial works, whether these are latent defects depends on whether they could have been discovered (with due diligence or skilled third-party advice) prior to or at the time of practical completion. If the answer is no, then it could be a latent defect in which case a longer limitation period applies.

The use of new technology with higher risks of latent defects may mean that a contractor would be exposed to the risk of claims for longer.

Conclusion

While there is an increasing drive towards the use of new technology in construction to achieve sustainability and efficiency goals, the law on contractors' liabilities has not changed. The burden of proof remains with the contractor to ensure the performance and protecting against any risks, known or unknown, of new technology used. Recent trends in the English court indicate a continuing focus on the extent of the contractor's duty of care both in tort and contract, and the reluctance to allow time bars to prevent a rightful claim from being brought against a negligent contractor where safety is at stake. This would apply to large residential and infrastructure projects. This is to be expected given that construction professionals and specialist contractors are employed, and relied on, for their specialist skills and knowledge. **CL**