Bingham's Corner

TONY BINGHAM
Is an Arbitrator, Mediator and Barrister. As well as that, Tony is a renowned writer, commentator and lecturer.

DESIGN AND BUILD, PURE WIND

DANGERS IN THE DEEP

A recent case shows the risk that design-and-build contractors are exposed to on complex projects such as offshore wind farms - even if they follow the design standards to the letter.

IT IS NOT UNKNOWN FOR CONTRACTS TO REQUIRE NOT ONLY COMPLIANCE WITH A SPECIFICATION BUT THE EXTRA MILE OF ACHIEVING A PARTICULAR RESULT. THAT'S A DOUBLE OBLIGATION

"The appearance of solidity designed to conceal pure wind." That's how one anchorman signed-off the general election marathon TV broadcast. Pure wind is at the heart of this construction design-and-build dispute I will tell you about. Important because all you builder folk who take on design-and-build adventures will be at even more risk once the lawyers weigh up this Court of Appeal case.

Solway Firth is a lump of the Irish Sea just across the way from the Isle of Man towards Carlisle. The giant energy enterprise E.ON got permission to develop an offshore wind farm. It named it the "Robin Rigg". Tenders were invited from a number of contractors for the design, fabrication and installation of 60 turbines. It went to the major Danish construction company MT HØjgaard.

The design-and-build promises in MTH's contract included: "The wind farm is to be designed, constructed and operated to provide the lowest lifetime cost option"; "The Works element shall be designed for a minimum site-specific 'design life' of 20 years without major retrofits or refurbishments"; "These are minimum requirements"; "The contractor will provide foundations to ensure a lifetime of 20 years in every respect without planned replacement"; "The choice of structure, materials, corrosion protection system operation and inspection programme, shall be made accordingly". None of that put the wind up this contractor. And lo and behold, those 60 turbines were all built by February 2009. All should be well for power supply at least until about 2029! But one year on, things were discovered badly wrong. The bill to put it all right is €26.25m (£18.6m). That work is still going on. Who pays?

Robin Rigg Wind Farm

Building these giant structures requires technology that presents some special challenges. First each requires a monopile driven into the seabed. Then one of those challenges is how to connect the bottom of the turbine tower to the top of the monopile. In 2004, an independent classification and certification agency based in Denmark, Det Norske Veritas, published an international standard for the design of offshore wind turbines. It is known as J101. I suspect that all folk involved in wind turbine work thumb each page day and night. It's a tad strict about acceptable levels of safety, procedures and measurements and insists on third-party certification to "place confidence and trust in the project". It talks about a return period of 50 years, whatever that means. And it's all in the contractor's contract, of course.

Anyway, no sooner was the work completed, cleaned, polished and fired up than a snag cropped up on a wind farm at Egmond aan Zee off the Dutch coast. The gizmo that connects the tall bit to the monopile called the transition piece began to slip down the monopile. It is 8m long and weighs 120 tonnes. A few months later the same happened at Robin Rigg. E.ON and MTH immediately began working together to fathom a remedy. Meanwhile, the court was asked to decide who bears that €26.25m. The decision in the Technology and Construction Court said it was the contractor.

That document, J101, contained a variable used in one of the equations, but it was an underestimation by a factor of 10. The contract intended that the contractor was to obey J101, and it did. Moreover, the contract intention was that the contractor be liable in any event. E.ON argued that it was for MTH to evaluate the specification in J101, carry out experiments, satisfy itself that J101 would work. The answer would have been to install sheer-keys but the contractor didn't include that in its bid. In my language it was seemingly up to the design-and-build contractor to look for errors and omissions in what it was told it had to do.

The contractor came to the Court of Appeal. MTH was found liable here as well. But not for €26.25m; it was only £10 on a counter-claim. Lord Justice Jackson explained. The general rule is that defects caused by an owner's specification are not the responsibility of the contractor unless the contractor expressly guarantees fitness for a specific purpose. The three judges decided that the contractor was obliged to provide works "fit for purpose" but qualified this with the phrase "as determined in accordance with the specification using good practice". That intends compliance with J101 - an employer document, with employer liability.

And in the hurley-burley of bidding for a design-and-build job, you contractors have to keep a beady eye out for that extra mile and price it. What chance?

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