DESIGN LIFE WARRANTIES AND FITNESS FOR PURPOSE IN CONSTRUCTION CONTRACTS: THE POSITION IN AUSTRALIA AND ENGLAND

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1. INTRODUCTION

Although Australian construction contracts quite commonly provide for design life warranties in respect of plant, equipment, building or structures, the concept of a 'design life warranty' has not been the subject of extensive commentary by the Australian legal profession or interpretation by the courts in Australia.

Design life relates to the period of time over which the works under the contract are to be designed to meet specified requirements. However, it is unclear how design life clauses relate to other contractual requirements, in particular fitness for purpose clauses. A question arises as to whether a design life warranty contains an implied fitness for purpose warranty; does the contractor actually guarantee that the finished works will be fit for purpose for the entire duration of the design life? Or is the contractor merely required to do work to a standard that it estimates will be sufficient for the works to last for that time? This issue is compounded when contracts provide for an express fitness for purpose clause; do these two clauses work together to create an actual guarantee, or are they different and conflicting standards?

There is uncertainty in Australia as to what 'design life warranty' means. However a number of overseas courts have considered the issue. A recent English case, *MT Hojgaard A/S v E.ON Climate and Renewables UK Robin Rigg East Ltd & Anor* [2015] EWCA Civ 407 (the MT Hojgaard Case) has considered the issue in that jurisdiction and may provide guidance for how the term 'design life' may be interpreted by the courts in Australia.

2. AUSTRALIAN POSITION ON DESIGN LIFE WARRANTIES

2.1 Design Life Warranty in Australia

Design life warranties have not been the subject of extensive judicial interpretation in Australia and the term does not have an implied meaning at common law. Instead, the courts try to ascertain what the parties intended by the term 'design life warranty'.

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There are no particular requirements for a 'design life warranty' to be valid. A design life warranty may be found in the general terms and conditions of a contract or in its specifications.

In Australia, a 'design life warranty' may be expressed in a contract in one of two ways. It may be:

1. an express term in the contract which states that a party will warrant a range of conditions in respect of the design life of the plant, equipment, building or structure. A common design life warranty would be that major repair will not be necessary for the design life of the plant, equipment, building or structure, subject to being operated and maintained in a reasonable manner; or
2. used as a measurement of time, in conjunction with an express or implied fitness for purpose warranty. For example, a contract may provide that a finished product has a 'design life' of 10 years.

DESIGN LIFE WARRANTIES EXPRESSLY SET OUT IN THE CONTRACT

An express design life warranty precisely sets out the length of the design life for each component of the equipment, plant, building or structure; any obligations on the parties for the term of that design life; and any qualifiers on the warranty.

For example, in *CH2M Hill v New South Wales* [2012] NSWSC 963 (the CH2M Hill Case) the contract clearly set out the obligations on the party providing the design life warranty and the duration of the design life warranty [1] for each component of the structure. [2] It also stated that certain structures would be maintenance free for 50 years [3]. In that case, the specificity of the design life warranty meant that the party providing those warranties was held to the precise wording of the warranty and was required to ensure that the specific components of the structure would be operational for the term specified.

DESIGN LIFE IN CONJUNCTION WITH FITNESS FOR PURPOSE WARRANTIES

'Design life' is also used as an engineering standard for the measurement of time. The term is often used in conjunction with other warranties.

In *Baulderstone Hornibrook Engineering Pty Limited v Gordian Runoff Limited & Ors* [2006] NSWSC 223, (the Baulderstone Case), clause E1.2 of the specifications provided:

> "*The various elements to be constructed under this Contract shall have a maintenance free design life of 50 years...*" [4]

The contract also included general fitness for purpose warranties. Einstein J held that the effect of clause E1.2 , read together with the fitness for purpose warranties in the contract, was that the contractor needed to exercise due skill and care in its design of the relevant elements and so that each element had a "design life" of 50 years.

Einstein J also went on to say (in obiter) that:

> "*…Design life refers to the period of time during which a structure or structural element, when designed, is*

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> *assumed to perform for its intended purpose with expected maintenance, but without major repair being necessary. The design life could also refer to the period over which a structure or structural element is required to perform its function without repair...*" [5]
>
> "*Design life relates to theoretical, probabilistic predictions of performance, and has no direct relationship to actual performance or service.*" [6] (Our emphasis)

In the Baulderstone Case therefore, unlike in the CH2MHill Case, a design life requirement was not considered to be an actual warranty that the structure would be operational for the specified time.

It is clear from the differences between the CH2MHill Case and the Baulderstone Case that the effect of design life warranties remains uncertain in Australia.

3. THE MT HOJGAARD CASE: HOW 'DESIGN LIFE' HAS BEEN INTERPRETED IN ENGLAND

3.1 The Facts

MT Hojgaard A/s (MTH), the contractor, entered into an agreement with E.ON Climate and Renewables UK Robin Rigg East Ltd and E.ON Climate and Renewables UK Robin Rigg West Ltd (E.ON) to design, make and install the foundations for a number of wind turbine generators.

The contract contained a number of performance standard requirements in clause 8.1 of the conditions of contract (which was second in the order of precedence in the event of an inconsistency in the contract), including that MTH should complete the work "with due care and diligence", "in a professional manner", "so that the Works…comply with the requirements of the Agreement", "so that each item…as a whole shall be fit for its purpose as determined in accordance with the Specification using Good Industry Practice" and "so that the Works when completed…shall…satisfy any performance specifications or requirements". [7] (our emphasis)

The Technical Requirements of the contract (one of the schedules to the contract, which was fourth in the order of precedence in the event of an inconsistency in the contract) also provided:

> "1.6 Key Functional Requirements: …The Works elements shall be designed for a minimum site specific 'design life' or twenty (20) years without major retrofits or refurbishments; all elements shall be designed to operate safely and reliably in the environmental conditions that exist on the site for at least this lifetime"; [8] (our emphasis) and "3.2.2.2 Detailed Design Stage: …The design of the foundations shall ensure a lifetime of 20 years in every aspect without planned replacement. …"; [9] (our emphasis) "3.2.6 Life: All parts of the Works, except wear parts and consumables shall be designed for a minimum service

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> life of 20 years." [10] (our emphasis)

The Technical Requirements also provided that the design should be in accordance with the international standard DNV-OS-J101:2004 (J101). [11] Designs which followed J101 were capable of lasting longer than 20 years.

MTH designed, constructed and installed the wind turbine foundations in accordance with J101. However, it was later discovered that J101 contained fundamental errors with the result that the grouted connection on the foundations was unsuitable and required remedial work. The parties commenced proceedings to determine who was liable for the cost of the remedial work.

3.2 The Decision at First Instance

The primary issue in the case was whether the combination of the fitness for purpose clause and paragraph 3.2.2.2 imposed "a strict obligation to achieve a service life of 20 years or merely an obligation to design the foundations on the basis of a 20 year design life in accordance with J101." [12]

At first instance (in the High Court in England), the Court considered that the requirement to comply with J101 using a design life of 20 years and the requirement that the design be fit for purpose for 20 years were not inconsistent. [13] Notwithstanding the requirement to comply with J101 and the multiple references to a design life of 20 years, the fitness for purpose clause and paragraph 3.2.2.2 combined in such a way that they constituted an actual warranty by the contractor that the completed works would last for the time specified in that paragraph (i.e., 20 years).

3.3 The Decision of the Court of Appeal

The Court of Appeal disagreed with the interpretation of the contract by the Court at first instance.

Lord Justice Jackson stated:

> "*It is not unknown for construction contracts to require the contractor (a) to comply with particular specifications and standards and (b) to achieve a particular result. Such a contract, if worded with sufficient clarity, may impose a double obligation upon the contractor. He must as a minimum comply with the relevant specifications and standards. He must also take such further steps as are necessary to ensure that he achieves the specified result.*" [14]

However, the contract in the MT Hojgaard Case was not of this character. Lord Justice Jackson considered that:

> "*If a structure has a design life of 20 years, that does not mean that inevitably it will function for 20 years, although it probably will.*" [15]

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As the contract provided that the work should have a design life of 20 years, and J101 was intended to provide what needed to be done to create a structure with a sufficiently high probability of functioning for 20 years, MTH had complied with the design life requirements of the contract by using J101.

The Court commented that if the contract did require an absolute warranty of quality, it should have been in the conditions of contract rather than "*tucked away in the Technical Requirements*." [16]

The requirement that the works should be "fit for its purpose as determined in accordance the Specification using Good Industry Practice" did not change the position. The Court considered that the obligation as expressed required the exercise of reasonable skill and care, and compliance with J101. It did not impose a warranty as to the length of the operational life. [17] Paragraph 3.2.2.2 was inconsistent with the remainder of the Technical Requirements and J101 and was "*too slender a thread upon which to hang a finding that MT Hojgaard gave a warranty of 20 years life for the foundation*". [18]

4. COMPARING THE AUSTRALIAN AND ENGLISH POSITIONS

Lord Justice Jackson's reasoning in the MT Hojgaard Case is consistent with Einstein J's reasoning in the Baulderstone Case. Both judgments consider that a design life requirement is not an actual warranty; instead, it reflects the requirement that the contractor exercise due care and skill in designing the relevant work to a standard which is likely to last for the period of time specified.

In contrast, in the CH2MHill Case, the Court appears to have treated the 'design life warranty' as an actual warranty that the work will last for the specified time. However, in all three cases, the Court has had the same approach – which is to look to the contract to try to ascertain the intention of the parties in respect of the term "design life".

5. CONCLUSION

Given the uncertainty in Australia that presently surrounds the concepts of 'design life' and 'design life warranties', parties who wish to provide for these concepts would be well advised to set out in precise detail the meaning of the warranty.

Notes:

[1] CH2M Hill v New South Wales [2012] NSWSC 963 at [97]

[2] CH2M Hill v New South Wales [2012] NSWSC 963 at [99]

[3] ibid

[4] Baulderstone Hornibrook Engineering Pty Limited v Gordian Runoff Limited & Ors [2006] NSWSC 223 at [423]

[5] Baulderstone Hornibrook Engineering Pty Limited v Gordian Runoff Limited & Ors [2006] NSWSC 223 at [1079]

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[6] Baulderstone Hornibrook Engineering Pty Limited v Gordian Runoff Limited & Ors [2006] NSWSC 223 at [1079]

[7] MT Hojgaard A/s v E.ON Climate and Renewables & Ors [2014] EWHC 1088 at [23]

[8] MT Hojgaard A/s v E.ON Climate and Renewables & Ors [2014] EWHC 1088 at [24]

[9] MT Hojgaard A/s v E.ON Climate and Renewables & Ors [2014] EWHC 1088 at [26]

[10] MT Hojgaard A/s v E.ON Climate and Renewables & Ors [2014] EWHC 1088 at [27]

[11] MT Hojgaard A/s v E.ON Climate and Renewables & Ors [2014] EWHC 1088 at [26]

[12] MT Hojgaard A/s v E.ON Climate and Renewables & Ors [2014] EWHC 1088 at [61]

[13] MT Hojgaard A/s v E.ON Climate and Renewables & Ors [2014] EWHC 1088 at [80]

[14] MT Hojgaard A/S v E.On Climate and Renewables UK Robin Rigg East Ltd & Anor [2015] EWCA Civ 407 at [79]

[15] MT Hojgaard A/S v E.On Climate and Renewables UK Robin Rigg East Ltd & Anor [2015] EWCA Civ 407 at [91]

[16] MT Hojgaard A/S v E.On Climate and Renewables UK Robin Rigg East Ltd & Anor [2015] EWCA Civ 407 at [97]

[17] MT Hojgaard A/S v E.On Climate and Renewables UK Robin Rigg East Ltd & Anor [2015] EWCA Civ 407 at [102]

[18] MT Hojgaard A/S v E.On Climate and Renewables UK Robin Rigg East Ltd & Anor [2015] EWCA Civ 407 at [106]

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