



HOW HAS DESIGN LIABILITY CHANGED IN NEC4 AND FIDIC 2017?

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TALK SUMMARY

- Design and different Design Standards for Liability
- FIDIC 2017 Suite – Second Edition (First Edition 1999)
- NEC4 June 2016
- Look ahead to Legal Developments in 2019



**How has Design
Liability Changed?**

- **Design = Selection = Process of exercising Choice**
 - Two Design Liability Standards:
 - 1) **Product** based standard = *Fitness for Purpose*
 - e.g **Contractor** Designing and Constructing a Facility
 - Performance based standard
 - 2) **Service** based standard = *Reasonable Skill and Care*
 - e.g Consultant Designer
 - Process based standard
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- ***Fitness for Purpose*** = product guarantee
 - Promise to achieve the specified or implicit “Purpose” for the Product/Plant
 - ***Reasonable skill and Care*** = promise not to be worse than “average” competence
 - Promise not to be “negligent” in relation to the preparation of the design or supervision of works
 - Two liability standards are not incompatible or inconsistent with one another
 - *MT Højgaard v E.ON [2017] UKSC*
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FIDIC 2017
AND DESIGN



FIDIC 2017: THE CONTRACTS

Conditions of Contract for
Construction

“Red Book”

Conditions of Contract for
Construction for Plant &
Design-Build

“Yellow Book”

Conditions of Contract for
EPC / Turnkey Projects

“Silver Book”

- **Fitness for Purpose – Clause 4.1 of Yellow Book:**

“When completed, the Works ~~(or a Section for the purposes for which Plant, if any) shall be fit for the purpose(s) for which they are~~ intended, as defined and described in the ~~Contract~~ Employer’s Requirements (or, where no purpose(s) are so defined and described, fit for their ordinary purpose(s))”

FIDIC 1999

- Narrow fitness for purpose requirement
- Purpose to be defined expressly in the Contract

FIDIC 2017

- Purpose to be defined expressly in ER
- Applies not only to the Works, but also Parts, Sections and major items of Plant
- Wider fitness for purpose requirement?



FIDIC 2017: DESIGN ISSUES (2)

- Fitness for Purpose obligation now backed by **new indemnity** at Clause 17.4 (Yellow Book):
 - “*The Contractor shall also indemnify and hold harmless the Employer against all acts, errors or omissions by the Contractor in carrying out the Contractor’s design obligations that result in the Works (or Section of Part or major item of Plant, if any), when completed, not being fit for the purpose(s) for which they are intended under Sub-Clause 4.1”*
 - Indemnity is **capped** by:
 - exclusion of liability for indirect and consequential losses (Clause 1.15)
 - the overall cap on liability (Clause 1.15)
 - level of liability limit stated in Contract Data or if not then an amount equivalent to Accepted Contract Amount
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FIDIC 2017: DESIGN ISSUES (3)

- **Indemnities** are very dangerous for Contractors – potentially no time limit; and no remoteness restraints on extent/quantum of liability
 - Design obligations now expressly to be backed by **insurance** (Clause 19.2.3):
 - Contractor expected to take out Professional Indemnity (PI) insurance
 - Where stated in Contract Data: PI insurance also required to indemnify Contractor against its liabilities for failure in carrying out design to achieve Fitness for Purpose Requirements
 - Query availability of such insurance
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FIDIC 2017: DESIGN ISSUES (4)

- Clause 5.1 Yellow Book contains enhanced requirements re **qualifications** of Designers
 - Guidance Notes include an 'Advisory Note' on Building Information Modelling (**BIM**) Systems (including which Clauses would need to be amended if BIM used)
 - Relevant “design” provisions virtually identical for FIDIC Silver Book (EPC/Turnkey)
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NEC4

AND DESIGN LIABILITY

- **NEC4** published in June 2017 (NEC2 2005; NEC3 2005):

“Evolution, not revolution”

“Reflects User feedback, industry developments and User best practice”

“Designed for international use”

- Still Plain English and present tense but now Gender Neutral
 - Structure of NEC4 very similar to NEC3 e.g Core Clauses supplemented by Optional Clauses
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NEC4 PROVISIONS RE DESIGN

- NEC4 Engineering and Construction Contract:

Clause 21.1 “The Contractor designs the parts of the works which the Scope states the Contractor is to design”

Clause 11.2(5) “A Defect is

- a part of the works which is not in accordance with the Scope or

or

- a part of the works designed by the Contractor which is not in accordance with the applicable law or the Contractor’s design which the Project Manager has accepted”



DESIGN LIABILITY UNDER NEC4 (2)

“Not in accordance with applicable law”?

- In the absence of express words to the contrary English Law provides that a Contractor’s Design has to be *“fit for purpose”*
 - NEC core Clauses do not expressly set out any Design Standard
 - “Purpose” in NEC4 will be set out in the **Scope** (NEC3 in “Works Information”)
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DESIGN LIABILITY UNDER NEC4 (3)

- NEC4 (like NEC3) needs express wording to change the Design Standard to ***“reasonable skill and care”***
 - Otherwise, to the extent the Contractor carries out Design, NEC is a ***“fit for purpose”*** Contract
 - In NEC4 the express wording employed to alter the Contractor’s Design Standard comes in Optional Clause X15
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- NEC4 Optional Clause X15

Option X15.1

“The Contractor is not liable for a Defect which arose from its design unless it failed to carry out that design using the skill and care normally used by professionals designing works similar to the works”

X15.2

If a Contractor corrects a Defect for which it is not liable under the contract it is a compensation event”



DESIGN LIABILITY UNDER NEC3

- Effectively Contractor liable if *negligent* design
- Contrast NEC3 wording:
- **NEC3** Optional Clause X15

Option X15.1 “The Contractor is not liable for Defects in the works due to his design so far as he proves that he used reasonable skill and care to ensure that his design complied with the Works Information”

- NEC3 contract *reverses* the normal burden of proof
 - Required Contractor to prove a negative i.e. it was not at fault
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GLENDOE TUNNEL COLLAPSE

SSE v HOCHTIEF (2018) Inner House of Court of Session

PROJECT FACTS

- NEC Design and Build Contract for Hydro Electric Plant
 - Contract Price £126 million (Dam; Powerhouse etc)
 - 6km Headrace Tunnel excavated by Hard Rock Tunnel Boring Machine
 - Tunnel designed to be substantially unlined
 - Design Life 75 years
 - Reasonable Skill and Care Option Selected (Option M NEC2 i.e. X.15 NEC3)
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UPSTREAM COLLAPSE FACE



DOWNSTREAM FACE OF COLLAPSE

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700 METRES DOWNSTREAM

- £200 million dispute:
 - £130 million Remedial Works, and
 - £65 Loss of Profit
 - NEC Reverse Burden of proof for “reasonable skill and care defence” meant Employer could sit back and force the Contractor to prove it was not liable for the collapse
 - Contractor had to prove every aspect of design and construction of tunnel
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One of many Grounds of Appeal:

Contractor did not discharge Burden of proof

- **Trial to establish Contractor exercised reasonable skill and care**
 - **87 Days in Court**
 - **16 Experts**
(40 Expert's Reports)
 - **46 Witnesses of fact gave evidence**
(103 Witness Statements)
 - **73,000 documents in Electronic Bundle**
(700,000+ pages)
 - **Judgment December 2016 Contractor won**
 - **Appeal November 2017**
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DESIGN LIABILITY UNDER NEC4

- **NEC4** has now adopted the more *typical* contractual situation which is that the Party alleging negligence has burden to prove negligence
 - Requires the Employer to identify the alleged shortcoming and to explain why the Contractor was negligent
 - Cannot just sit back and say to the Contractor that it has to prove it was not at fault
 - Mischief of NEC3 design provisions now corrected
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LOOK AHEAD TO
DESIGN LIABILITY IN 2019



DESIGN LIABILITY GOING FORWARD?

SSE v HOCHTIEF (2018) Inner House of Court of Session

- Glendoe Tunnel Collapse
 - NEC Contract with equivalent of Option X.15 (NEC2 Option M)
(i.e. Contractor not liable for Defects of Design if it proves exercised reasonable skill and care)
 - Scottish Court of Appeal held (2:1 majority):
 - Contractor not negligent and exercised reasonable skill and care in relation to design
 - Contractor discharged reverse burden of proof; and
 - Contractor did not give a warranty that tunnel would last 75 years
 - **BUT** Contractor liable anyway because collapse held to be due to a failure of ***implementation*** not of design
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SSE v HOCHTIEF (2018) (Cont.)

- Permission to appeal to UK Supreme Court granted. **Hearing back end 2019?**
 - First NEC Case to UKSC?
 - Design liability: fitness for purpose and reasonable skill and care
 - What is design and what is only “implementation” i.e. workmanship
 - Design Life revisited (NB Højgaard 20 years; SSE v HOCHTIEF 75 years)
 - (+ Effect of NEC Indemnity provisions)
 - (+ Liability of Co-insured where Joint Insurance for damage to the works - Gard Marine v China National Chartering [2017] – “Presumption” revisited)
 - More significant than Højgaard?
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END



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Max Wieliczko is Head of HFW's International Construction Team and has specialised exclusively in construction law since 1987. He advises in relation to all aspects of project procurement and delivery, and has particular expertise in relation to complex high value international infrastructure disputes

Work includes oil and gas production facilities, process plants, tunnelling, roads, railways and bridges, energy from waste facilities and other power plants; on and off-shore wind, hydro electric, hospitals, hotels, factories, and major city developments. Max is co-author of *Construction Contract Variations*, published by Informa Law, and which is the only current specialist text book on this subject. He is also a regular conference speaker and has published articles in a number of legal and construction industry journals

Legal Directories say: ***"He's extremely quick and clever, and I feel assured with him in my corner."*** (Chambers 2018) and he ***"has superb industry knowledge and experience combined with an amazing ability to see through complex matters from the outset"*** (Chambers 2017)