Design liability under national engineering contract (nec)

Design Liability under NEC

Problem

Every construction or engineering project is generally designed and occasionally defects occur as a result of defective design. These defects if possible then have to be rectified and this has associated costs. Where interested parties cannot agree on which of them is responsible for the defect they often seek a legal remedy to allocate costs. To avoid this legal entanglement the majority of construction projects are carried out under the relative control of a contract that identifies the party that is responsible for the design.

The degree of liability depends on how the design responsibility has been allocated under the contract. However, the complicated interaction of various legal elements with contractual provisions can consequently make this difficult to determine. For practical use a contract should allow for the incorporation of clear acceptable levels of liability to both parties. Research by Gaafar and Perry (1998) suggests using a contract that allows for a spectrum of liability such as the NEC/ECC. This allows the level of responsibility to be tailored to the individual project by the inclusion of secondary clauses.

Another consideration that must be investigated is that even if the design responsibility is not allocated under the contract, or no written contract exists, a level of responsibility under tort almost always exists. This responsibility is often forgotten and is rarely referenced in the contract’s text.

The level of design liability differs depending on what type of organisation the designer works for. For example, the level of design liability is the same in tort for a consultancy’s designer and a contractor’s designer, however, under a contract the level of liability may be different. In tort, the nature of the designer’s obligation is to exercise ‘ reasonable skill and care’ irrespective of the designer’s organisation. In contract, a consultancy’s designer’s liability is to exercise reasonable skill and care unless they know the purpose for which they are designing in which case a fitness for purpose liability is implied. Because of this risk of suffering an implied liability terms of engagement for a consultancy’s designer usually contract out fitness for purpose requirement. This is useful as no level of Professional Indemnity insurance exists to cover a consultancy’s designer for fitness for purpose liability and it is unlikely the consultancy would be able to independently cover the risk. Even if a fitness for purpose liability is excluded, a consultancy’s designer could still be liable for not delivering the end result, if it can be proved that they did not use ‘ reasonable skill and care’ and has ultimately committed professional negligence under tort as well as being in breach of contract.

As the tort of negligence is implied into both written and none written contracts, wherever a situation arises where one party owes another a duty of care, it is essential to look at its meaning. The Institution of Civil Engineers (2006) defines negligence as being based on the inflicting of injury or loss upon another person by failure to take such care as the law requires.

A contractor’s designer suffers risk by reference to the statutory implied terms, under the Sales of Goods Act 1972 and the Supply of Goods and

Services Act 1982, which will impose certain contractual warranties relating to merchantable quality and fitness for purpose, irrespective of what the contract says. The statutory implied terms give rise to risk for the designer's contractor in that a contract which is silent on the point will impose on him a strict liability for all the obligations he has undertaken, including his design obligation. It is also worth noting that because of this, if a contractor chooses to appoint a consultancy designer under a subcontract, even if he is using the relevant standard subcontract form of the main contract, they may open themselves up to considerable risk. This is because they still have an obligation to deliver the end result that is fit for purpose, unless there are express provisions to limit liability. This why most Design and Build standard form contracts limit the liability of the contractor for design to that of an architect under a traditional build contract. However, if there are express provisions in the contract to impose an explicit fitness for purpose liability on the contractor these provisions will then be subject to the Unfair Contract Terms Act 1977.

As already stated, there are two levels of design ' reasonable skill and care' and ' fitness for purpose'. These two terms are the most commonly used and even though they are an over simplification it is important to define them in more detail. ' Fitness for purpose' is just that, it should satisfy and/or deliver the client's requirements whereas ' reasonable skill and care' can be further split into ' professional skill' and ' duty of care'.

As well as carrying out their specialist skill competently the construction professionals have to exercise a defined level of care. This duty of care is based on foreseeability, where one must take reasonable care to avoid acts,

omissions or statements, which could reasonably be foreseen to be likely to result in injury or loss to other people. The standard of care to be exercised is that of the ordinary, prudent person and will depend on the particular circumstances of each individual case. In the context of this proposal it would be the construction professionals, working for the contractor who must exercise due care to highlight errors when reading and implementing the client's design, or the contractor's own designer who must exercise due care when creating and developing a design (Institution of Civil Engineers, 2006).

The element of skill required by a construction professional, whether they are an engineer, designer, quantity surveyor or project manager is to carry out their own specialist skill competently. The courts have defined the specialist skill and competence on many occasions and the following direction to the jury in Bolam v Friern Hospital Management Committee [1957], has been adopted by the House of Lords and is frequently cited:-

" Where you get a situation which involves some special skill or competence … the test is the standard of the ordinary skilled man exercising and professing to have that special skill. A man need not possess the highest expert skill … it is sufficient if he exercises the ordinary skill of the ordinary competent man exercising that particular art" (Institution of Civil Engineers, 2006).

As previous research by Gaafar and Perry (1998) suggests, the NEC/ECC contract is an acceptable document that can be tailored to individual projects and remain workable and acceptable to both client and contractor. These advantages could explain why it has rapidly become the contract of

choice for public sector work. Due to the economic situation that exists in the construction and engineering industry at present the majority of work is in the public sector and as a result is under NEC3 the most recent version of NEC/ECC form of contract. According to the Bank of England the current economic situation is going to continue for at least the next 6 months before signs of recovery start to filter through to the construction industry in the form of private investment. Because of this, more disagreements over design defects carried out under the NEC3 form of contract are probably going to go before the courts. It would be useful then for contractor’s construction professionals to know what design liabilities the contractor could be exposed to so that they can take steps to avoid any legal entanglement. This is especially prudent as the NEC3 contract does not include the term ‘ fitness for purpose’ in its text and instead relies on the works information given by the client to specify the performance requirements and secondary clauses to limit a contractor’s liability. When this information is incomplete or missing it creates a situation where the responsibilities and the end requirements are unclear and the contract reverts back to a silent position as discussed earlier and imposes a strict liability upon the contractor, unless secondary clauses to expressly limit liability are included within the contract document. Even where these clauses are included contractual warranties implied by the Sales of Goods Act 1972 and the Supply of Goods and Services Act 1982 may take precedence. It is important to note that in this silent position a contractor would not be liable for design works carried out by subcontractors even if appointed by them under the relevant NEC3 subcontract form.

The aim of the dissertation then, is to carry out primary and secondary research to determine whether, and if so, how, a contractor’s design liability can be limited to reasonable skill and care under the NEC3 suite of contracts.

Your problem specification specifies the problem alright, but it does not indicate what can be done to resolve the problem or what issues need to be addressed in resolving this problem. These issues would form the basis of the ensuing chapters of the dissertation.

There is a decided lack (although not a total absence) of appropriate citation to substantiate your many authoritative statements in the problem spec.

Literature Review

Current literature on the National Engineering Contract 3 (NEC3) includes legal cases, commentary or ‘ how to use guides’ and finally but not exhaustively research by construction and engineering academics and/or professionals. This literature individually covers the different aspects of design liability and the NEC3. Need to make more substantial to provide a structured overview.

The NEC3 is endorsed and recommended by the UK Governmental Office of Government Commerce for use on all public sector construction projects. And because the majority of current construction and engineering work is in the public sector at present it is getting a lot of use and therefore it is important that those using it fully understand it. To that end Eggleston (2006) has written a comprehensive commentary on the NEC3. His commentary explains how each NEC3 contract is uniquely put together to

meet the employers needs by assembling clauses from the option structure and by particularisation in accompanying documents.

This commentary is particularly useful in that it helps the reader use the contract by providing step by step instructions to ensure the basic building blocks of the contract are set up correctly. A good example of this is the five steps that an employer must follow in order to create a set of NEC3 conditions for a particular contract.

Eggleston’s (2006) commentary is an overview of the entire suite of NEC3 contract documents and gives a brief definition of the clauses. It does not give instruction of which combination of options and clauses to use but instead informs the user how to incorporate their chosen selection into a working document. On the down side the book does not give you enough legal analysis and only refers to a handful of cases and to this end does not highlight sufficiently what the repercussions of not getting it right are. This means unless the professional using it is fully versed or doesn’t follow a commentary such as Eggleston’s to the letter they could end up in hot water regardless of what secondary clauses they think are in place to limit liability.

Using Eggleston’s (2006) definitions of clauses and with cross reference to an NEC3 contract it is apparent that it is the secondary options X15 limitation of contractor’s liability for design and X18 limitation of liability are the most relevant to this proposal. This is because they are the clauses that can be included if agreed between the client and contractor to pre-determine the level of liability. Need to insert what Eggleston says… Difference between two clauses and what they limit…Contradiction with works information…

Express catch all sentences added under Option Z or included in works info...

Eggleston's thoughts on silent position...

Gaafar and Perry (1998) have written an insightful paper that is relevant to the proposed aim of this proposal. They based some of their findings on communication with an unnamed author involved in the development of the NEC. From this they discovered that these optional clauses came about due to legal advice that was given to avoid the term fitness for purpose and to the eventual adoption of the notion that the employer would either define the extent of his requirements for performance through the works information or would limit the liability through the choice of an optional clause.

The term ' fit for purpose' is very open to interpretation and could be a reason why it was left for the employer to fully define their requirements. Gaafar and Perry (1998) were unable to find a precise definition for the term ' fitness for purpose' and concluded from comparing correspondence and discussion with unnamed legal academics and professionals that no such definition exists. This is hard to accept as regardless how many legal academics and professionals were contacted it is precedence set in the courts that establishes a meaning for the term not the legal academics and professionals opinion. It may be the case that these legal academics and professionals are unaware of any relevant case law and it is unlikely that they exhausted all published volumes. In addition Gaafar and Perry (1998) may have narrowed the question posed to the legal academics and professionals too much and a definition may exist in a non construction and engineering context that could be applied if the principles are the same.

In addition to correspondence and discussion Gaafar and Perry (1998) also carried out a survey to determine the desirability to be able to adjust the level of liability. They highlight that 30% of clients questioned in the survey said that a ‘ fitness for purpose liability’ is not desirable as they recognise the practical and commercial problems it can cause. Gaafar and Perry (1998) expand on the description of these problems reiterating that professional designers do not have to carry a professional liability higher than ‘ reasonable skill and care’ and therefore no higher level of insurance cover exists. This means that the contractor can not obtain cover either and because of this if a ‘ fitness for purpose’ obligation exists and the design is carried out by a professional designer under a subcontract, the contractor can not pass this liability down to them. This leaves the contractor carrying a large uninsured risk. This unexpected result in their findings gives strong support to their recommendation of using a contract that allows liability to be tailored to an individual contractual situation. The theory and supporting research is comprehensive, however, the raw data is not given and it undermines their reasoning, as it is impossible to determine the significance of the results without knowing the sample size, methods used, the context and appropriateness of the questions.

Gaafar and Perry (1998) was published in the International Journal of Project Management and looks at a number of problems associated with the interaction of legal elements and contractual provisions. They look at, but do not directly compare, a number of standard forms of contract and their individual advantages and disadvantages when the limitation of design

liability is the key issue. The paper concludes by recommending the use of the NEC contract as they suggest it provides a spectrum of liability.

Despite their suggestion of using a contract that allows a spectrum of liability they importantly acknowledge that a strict liability and obligations under the Sales of Goods Act 1972 and the Supply of Goods and Services Act 1982 exists and is difficult to sign away. This difficulty in signing away rights is also made reference to when they discuss liability under tort and the inclusion of express clauses to limit liability. These important points included by Gaafar and Perry (1998) are relevant to this proposal as they have a bearing on how effectively liability can be limited.

Professor J. Perry and Dr H. K. Gaafar are academics at the School of Civil Engineering, the University of Birmingham and for this reason their assumptions on NEC3 in practice are likely to be based on 3rd part information and not their own practical experience within the construction and engineering environment.

It is also worth noting that The Housing Grants, Construction and Regeneration Act 1996 (HGCRA) states that parties cannot sign away certain rights under UK law and current precedence will determine what obligations exist regardless of whether a clause was included to limit liability. The HGCRA forms the basis of the current UK law and as such must be treated seriously and acknowledged as the presiding authority on set aspects of construction projects. It is also important to note that the HGCRA is 13 years old and largely based on the report by Latham (1994), as such developments

have happened in the way contracts are worded to either incorporate it or find ways around it.

Egan (1998) suggests that a move to partnering and mutual cooperation will do away with a need for contracts. In this situation a strict liability will be implied by current UK law and legislation and as discussed a ‘ fit for purpose’ obligation will be the default situation. If clauses intended to limit design liability are not effective then Eagan’s (1998) view that; “ designers should work in close collaboration with other participants in the project…” will protect the contractor’s and reduce the risk as they will be fully aware of the requirements and ultimately able to deliver the end product that is ‘ fit for purpose’. This work by Egan (1998) is a very theoretical academic view and 11 years on has not fully been adopted despite moves to create more trust through partnering, however, it does provide an alternative view to the confrontational and aggressive stand many contractors and clients are adopting in the economic down turn.

Wallace (1995) states his opinion that the obligation to construct a work capable of carrying out its intended use overrides the obligations to comply with specification given in the works information. If this is the case even though a contractor may have produced a design that complied with all the works information, if the end result is not ‘ fit for purpose’ they are then responsible. This goes back to the implied obligation discussed earlier and responsibility of the contractor to request more information and highlight lack of clarity in the works information. They may have done everything including ‘ reasonable skill and care’ to produce a design that complies with the works information but if the works information was inadequate they were

liable for not correcting this fault and therefore liable for not producing a design that could deliver. Wallace (1995) published this work a year after Latham (1994) and in a climate where a more progressive approach to construction was the new way of thinking, however, it ignores this work and focuses on fact and the law as it stood at the time. This is not a bad thing but when applying Wallace's work to contracts such as the NEC3 it does not always directly apply and extrapolation of the legal principles is necessary, however most are still the same and the book is still widely accepted and used.

Jackson and Powel (1992) conclude that the particular obligations of a contractor to his client are generally of a different nature from those owed by a professional man to his client. They make the point that this does not expressly state that the contractor's obligations amount to a fitness for purpose requirement. However they imply in the passage, " my complaint against him is not that he has failed to exercise reasonable skill and care in carrying out the work but that he has failed to supply what was contracted for", that a higher level of liability than reasonable skill and care exists and that the precise level of liability is governed by what is stated in the totality of the contract. Jackson and Powel (1992) is considered to be an accepted legal text and the authors experts in their field. This opinion is supported by the fact that the book has been quoted in the courts. A good example being; Lady Justice Butler-Sloss in the Court of Appeal regarding the case of Sansom and Monaghan v. Metcalf Hambleton & Co (1997) (Was it a construction law case? Was the case to do with design liability?) EGCS 185 who quoted the book as being a helpful summary. This use in 1997 is important as it is post

HGCRA and although it is 17 years old has many useful interpretations that are still relevant. For example, the concept mentioned above regarding totality of the contract is very similar to the commentary detailed in Eggleston (2006) 14 years later regarding liabilities imposed by the entire contract.

In relevance to this proposal then, if the book and the authors are deemed to be an authority on the subject of negligence their implications above regarding totality of the contract carry significant weight. This would suggest that secondary clauses under NEC3 are not necessarily going to limit a contractor’s liability to reasonable skill and care.

In addition to the above works, NEC itself provides literature in both on its website and in published form, and despite the inherent bias it may carries is worth reviewing. The bias is there because the NEC has an invested interested in portraying the NEC3 in a positive light to increase sales, however, it is useful for reference to clarify technical points and attain original copies of contract wording.

What is clear is that each of these commentaries focuses on a particular area of a contract or takes a view from one particular party and at present there is nothing comprehensive to show all the interrelationships of NEC3 contractual clauses and UK law and legislation. As a result unless the employer compiling the contract or contractor entering into an NEC3 contract fully understands the full ramifications of the options and clauses chosen they should seek professional legal advice. As described by Gaafar and Perry (1998) these interrelationships are very complicated especially to

the non legal professional. Gaafar and Perry (1998) try to bypass the need to understand all these complicated interrelationships by developing and suggesting the use of a Spectrum of Liability, however, as acknowledged by them no contract currently exists that fully allows for this. As stressed by Latham (1996) though and indeed acknowledged by Gaafar and Perry (1998) there are certain obligations and implied responsibilities that cannot be signed away and a strict liability is imposed unless express clauses are used to support this flexible spectrum. Only the NEC3 contract comes close, however, the effectiveness of secondary clauses to control levels of liability is difficult to determine due to the complex legal interrelationships mentioned above. To establish whether liability can be controlled in an NEC3 contract this dissertation will use arguably the main aspect that has most bearing design liability and seek to demonstrate the following conjecture:

“ A contractor’s design liability can be limited to ‘ reasonable skill and care’ under NEC3 by use of secondary clauses.”

Can expand to 2500 or 3000 words

In final submission should include a statement in the summary to the literature review as to where the dissertation sits in relation to the main authors outlined in the introduction to the literature review.

Methodology

To manage the presentation of this dissertation it has been split into a number of chapters. The overall dissertation will form a piece of work that can be useful to all construction and engineering professionals who are considering entering into an NEC3 form of contract.

Chapter 1 will be derived from the problem specification, literature review and methodology that form this dissertation proposal.

Chapter 2 involves carrying out extensive secondary research. This will take the form of investigation into legal precedence that exists for cases with relevance to a contractor’s design responsibility and associated liability under NEC3. In addition to this, investigation into accepted academic views, professional interpretation of NEC3 clauses and commentary on UK statute and legislation is necessary. Combined this will form a theoretical ‘ perfect world’ view of design liability and act as the control for this research.

Chapter 3 will explore construction professionals’ understanding of design liability under an NEC3 form of contract. To do this a statistically sufficient number of construction professionals will be interviewed. The questions are designed to be comprehensive enough to generate the desired responses but have been deliberately left open ended to ensure they do not lead the interviewees in a certain direction or stifle responses. The benefit of this is that a greater insight into the interviewees experience and knowledge is gained and helps determine how much weight to assign the responses. The results will then be summarised and initial statistical processing carried out to allow them to be analysed. The open ended nature of the interview questions also gives the opportunity for contractors’ problems that are not covered by the interview questions to be picked up and acknowledged and be compiled into the summary conclusions.

Chapter 4 will seek to substantiate or disprove the conjecture made in Chapter 1 by comparing the differences between the control in Chapter 2

and the summary conclusions made from the interview results in Chapter 3. Depending on the outcome of this comparison will determine the recommendations made in this dissertation that aim to benefit construction professionals thinking of entering into an NEC3 form of contract.

Chapter 5, the final chapter seeks to bring together all the conclusions made in the above chapters into a final summary.

The outcome of the comparison in Chapter 4 should identify how effective the NEC3 form of contract's intentions are in regards creating a contract that is able to limit design liability by the inclusion of secondary clauses or whether other factors come into play and greater care and legal advice is needed before a contractor signs up to an NEC3 form of contract.

The comparison will also determine whether any of the additional problems or negative experiences identified by the construction professionals in the interviews is real or merely perceived due to lack of understanding of UK law and of the NEC3 contract in general.

If they are merely perceived, the recommendations made in this work should allow them more confidence when deciding whether or not to sign up to a given NEC3 contract. They would then be able to make an informed decision as to whether an included clause's attempt to limit liability under NEC3 would safeguard them or whether they would be exposed and need to adjust their price to suit the increased risk of what is effectively an imposed ' fit for purpose' design liability.

Need to justify research method. This justification is done by reference to established research methods authors. You make only one reference to Blaxter et al but it does not really get to the bottom of what you are doing and why. You do not eliminate other methodologies. Do other authors agree? A good methodology will compare the recommendations of three or four research methods texts. You might like to look at some of the following:

1) Dissertation Research and Writing for Construction Students Dr S. G. Naoum Butterworth Heinneman 808. 066624 NAO

2) Research Methods in Construction – Fellows & Lui

3) Hart, C. 2005, Doing Your Masters Dissertation, SAGE Publications Ltd., London

4) Preece, R. 1994, Starting Research: An Introduction to Academic Research and Dissertation Writing, A Cassell Imprint, London

5) Blaxter, Hughes & Tight 2006, How to Research, Open University

6) Questionnaire Design, Interview and Attitude Measurement A. N. Oppenheim Continuum 300. 723 OPP

The methodology should be introduced by a statement about the theoretical perspectives being employed, e. g. you are approaching this dissertation from a legal and contractual perspective by way of offering appropriate practical advice to the industry ...

Need to justify structure. Justification for the structure requires cerebral argument and includes some linking text between your discussion on the content and format of each chapter. Remember the chapters should be based on the issues to be addressed as identified in the problem specification, so your justification of the structure could be based upon the logic of dealing with those issues.

References

Blaxter, L., Hughes, C. and Tight, M. (2006). How to Research 3rd Ed. Open University Press. Maidenhead.

Eagan (1998). Rethinking Construction. Department of the Environment, Transport and the Regions. London.

Eggleston, B. (2006). The NEC3 Engineering and Construction Contract 2nd Ed. A Commentary. Blackwell Publishing. [Online] Available from: http://books. google. co. uk/books

Accessed 07. 07. 09

Gaafar, H, K. and Perry, J, G. (1998). Limitation of design liability for contractors. International Journal of Project Management Vol. 17, No. 5, pp. 301-308. Elsevier Science Ltd.

Institution of Civil Engineers (2006). ICE Legal Note – Liability for Latent Defects. Institution of Civil Engineers. London.

Jackson and Powell (1992). Professional Negligence 3rd Ed. Sweet and Maxwell. London.

Latham (1996). Housing Grants and Regeneration Act 1996. London. Available from: http://www. opsi. gov. uk/ Accessed 22. 08. 09

Murdoch, J. and Hughes, W. (2005). Construction Contracts 3rd Ed. Law and Management. Spon Press. Oxon.

Wallace, D. (1995). Hudson's Building and Engineering Contracts, Volume 1, 11th Ed. Sweet and Maxwell. London.

Uff, J. (2005). Construction Law 9th Ed. Sweet and Maxwell. London.

Bibliography

Blaxter, L., Hughes, C. and Tight, M. (2006). How to Research 3rd Ed. Open University Press. Maidenhead.

Dissertation Creation. Dissertation Help – How to Write and Structure a Dissertation Proposal [Online] Available from: http://www. ukdissertations. com Accessed 07. 07. 09

Eagan (1998). Rethinking Construction. Department of the Environment, Transport and the Regions. London.

Eggleston, B. (2006). The NEC3 Engineering and Construction Contract 2nd Ed. A Commentary. Blackwell Publishing. [Online] Available from: http://books. google. co. uk/books

Accessed 07. 07. 09

Gaafar, H, K. and Perry, J, G. (1998). Limitation of design liability for contractors. International Journal of Project Management Vol. 17, No. 5, pp. 301-308. Elsevier Science Ltd.

Institution of Civil Engineers (2006). ICE Legal Note – Liability for Latent Defects. Institution of Civil Engineers. London.

Latham (1996). Housing Grants and Regeneration Act 1996. London. Available from: http://www. opsi. gov. uk/ Accessed 22. 08. 09

Murdoch, J. and Hughes, W. (2005). Construction Contracts 3rd Ed. Law and Management. Spon Press. Oxon.

The Guild of Architectural Ironmongers (2004). Commercial and Contract Law.

Uff, J. (2005). Construction Law 9th Ed. Sweet and Maxwell. London.

Additional useful paragraphs;

If the NEC3 contract is set up for the contractor to have design responsibility, then the contractor’s design must comply with the works information. Even if the optional clause to limit liability is used, the performance specification given in the works information will override it and therefore the contractor’s liability may or may not be interpreted as ‘ fitness for purpose’ depending on how the works information has been drafted with a strict liability imposed.

Results

Ques