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Case No: HT-2019-000218

Neutral Citation Number: [2021] EWHC 1116 (TCC)

IN THE HIGH COURT OF JUSTICE
BUSINESS AND PROPERTY COURTS
TECHNOLOGY AND CONSTRUCTION COURT (QB)

Rolls Building
Fetter Lane
London, EC4A 1NL

Date of judgment: 30 April 2021

Before :

THE HONOURABLE MR JUSTICE FRASER

Between :

(1) **Beattie Passive Norse Limited**
(2) **NPS Property Consultants Limited**
Claimants

- and -

Canham Consulting Limited
Defendant

Approved Judgment

Helena White (instructed by **Birketts Solicitors**) for the Claimants
Rupert Higgins (instructed by **Reynolds Colman Bradley LLP**)
for the Defendant

Hearing dates: 3, 4, 8, 9, 10 and 19 March 2021
Draft distributed to parties 21 April 2021

Mr Justice Fraser:

1. This judgment is in the following parts:
 - A. Introduction
 - B. The Issues
 - C. The Two Claimants
 - D: The Witnesses of Fact
 - E. The Experts
 - F. Negligence
 - G. Causation and the Decision to Demolish
 - H. Conclusions

A. *Introduction*

2. These proceedings concern a claim in professional negligence brought by Beattie Passive Norse Ltd (“BPN”) and NPS Property Consultants Limited (“NPS”) as claimants against the defendant, Canham Consulting Ltd (“Canham”), a practice of consulting engineers.
3. At first sight, these can be simply seen as proceedings with an entirely conventional background, explained as being a claim both for breach of contract and in negligence against professional engineers, Canham, in respect of the design of foundations at a site in Burwash, Sussex (“the Site”). The Site was used to construct two separate PassivHaus blocks, and these are referred to as Blocks A and B. Each block contained a small number of houses, connected to one another, as what are sometimes called terraced houses. PassivHaus is a proprietorial term for a particular type of housing, constructed both in timber and brickwork, originating in Germany. Canham designed the foundations for both blocks, using pad foundations and ground beams. The type and depths of these foundations, their dimensions (particularly of the pads themselves), and the way in which the different elements of the foundations are connected, are important features of the design. The Site was in an area of Wadhurst clay, with a relatively shallow layer of topsoil above that, prior to the commencement of the construction works generally. It was important that the foundations were sufficiently well designed (and also constructed) such that the two blocks, once built, would be sufficiently resistant to movement that would otherwise occur. This meant that foundations were required of sufficient robustness for this particular Site.
4. The design of the foundations by Canham was, in some respects, negligent; some of the particulars of negligence are effectively agreed by Canham’s expert structural engineer. The design, in certain respects, fell below the required standard of a reasonably competent engineer exercising due care and skill. The Particulars of Claim state that “while the Claimants were seeking to complete the Works, they discovered significant deficiencies in the design and, therefore, construction of the foundations and lack of adequate connection between the foundations and the ground beams and structure...” and so they “decided, reasonably and in order to mitigate their loss, to demolish and rebuild both Blocks”. The total losses claimed in the pleading were approximately £3.7 million, including the full cost of rebuilding following demolition.

Demolition undoubtedly took place, and the two blocks were rebuilt. The Statement of Truth to the Particulars of Claim was signed by the claimants' solicitor, rather than a director of either claimant company.

5. BPN and NPS are related in the following way. NPS and a company called Beattie Passive Build System Ltd ("BPBS") formed a construction joint venture company, that company being BPN. NPS is therefore a shareholder of BPN. Someone called Mr Ron Beattie (who was not called as a witness by the claimants) was at the time a director both of BPBS and also BPN. BPBS has the licence for the Beattie Passive Build System, which is a PassivHaus approved system of construction.
6. In early 2014, BPN tendered to design and construct Block A and Block B at the Site. That tender was made to another company, called Hastoe Homes, which the witnesses of fact for the claimants referred to as "the client". The Particulars of Claim plead that "Mr Ron Beattie on behalf of the First Claimant and/or on behalf of the Second Claimant and BPBS engaged the Defendant to carry out the civil and structural design". That averment plainly elides together a range of potential contractual relationships, all into one rather general statement. It cannot be right, and I do not accept, that one person was acting on behalf of all three different companies at the same time, in engaging Canham as the designer. It is now accepted by Ms White for the claimants (quite correctly and sensibly) that Canham was engaged by BPN, the date of that being agreed as 20 April 2014.
7. Beattie Passive Construction Ltd ("Beattie Construction"), another company in which Mr Beattie was involved, was contracted by BPN to perform the construction works. BPN was engaged by Hastoe Homes on 15 May 2014. Beattie Construction was engaged by BPN on a JCT Design and Build 2011 Contract on 12 August 2014. Mr Ron Beattie was a director both of Beattie Construction and also BPN (as well as being a director of BPBS). This contractual arrangement is described by the claimants in their submissions as being "back to back". This expression means that the contractual obligations of Beattie Construction to BPN matched the contractual obligations that BPN owed to Hastoe. BPN must therefore have been engaged by Hastoe on the same JCT terms.
8. The groundworks were commenced in September 2014 for Block A and Block B, the foundation works being performed by Foxdown Engineering Ltd ("Foxdown"), a groundworks sub-contractor. Foxdown had been engaged as a sub-contractor by Beattie Construction. To be fair to Foxdown in this judgment (which as with all judgments, will be publicly available), the most recent revisions of the drawings issued by Canham to BPN, the company that engaged Canham, do not seem to have been issued for construction by Beattie Construction to Foxdown. Foxdown were issued with an earlier, superseded, set of drawings. Although Beattie Construction and BPN appear to be controlled by the same people (or some of the same people), there is limited evidence available concerning the exact working of the relationship between them. There is therefore limited evidence about whether BPN (who received the Canham drawings from Canham) issued them onwards in a full and timely fashion to Beattie Construction. Whether they did or not, Beattie Construction did not pass them on to Foxdown. That is clear on the face of emails originating from Foxdown. Foxdown used the Revision A version of the drawings for construction, and these were issued to Foxdown "for construction". Foxdown cannot, therefore, be criticised for using them for construction. This factor became known in about 2016, well after

Foxdown had constructed the foundations, and is heavily relied upon by Canham in these proceedings.

9. Regardless of the reasons for this happening, the Revision B drawings were clearly not used by Foxdown when constructing the foundations. Hence the foundations were constructed by Foxdown at a time when Revision B drawings with certain foundation depths, and dimensions of pads, had in fact been produced by Canham (and had been issued by Canham to BPN), but were not made available to Foxdown. Foxdown only had issued to it by Beattie Construction the Revision A drawings with shallower depths, and smaller dimensions of pads. This version of the design is therefore the one that was used for each of Block A and Block B, which meant that the foundations as constructed did not match the foundations as designed in the Revision B drawings for the two blocks.
10. Two further factual complications are present in this case. Firstly, the works that were performed by Beattie Construction in terms of the building of both Blocks A and B generally (including the superstructure) were found to be defective. The degree to which they were defective – namely, whether they were seriously defective such that the whole of the structures required demolition in any event, or merely defective such that they required remedial works short of demolition – is in issue. The decision to demolish Block A was made in May 2016 and demolition of that block commenced in July 2016. Remedial works were already underway to Block B when the demolition of Block A took place, as those remedial works had commenced in May 2016. A decision to demolish Block B was then made in September 2016, part of the way through the remedial work for that block, and that demolition commenced in November 2016.
11. Secondly, Beattie Construction had its engagement under the JCT Design and Build Contract form terminated by BPN on 27 August 2015. The works were therefore left uncompleted and another contractor, RG Carter Ltd (“Carter”), was engaged both to inspect the works performed by Beattie Construction prior to its termination, and also to complete the works left unfinished by Beattie Construction as a result of that termination. There is, again, extremely limited evidence concerning the process whereby one company, BPN, decided to, and then did, terminate the contractual engagement of another associated company, Beattie Construction, where both of those companies had at least some directors in common, not least Mr Ron Beattie. However, the investigation by Carter of the work actually performed by Beattie Construction, and also investigations by Canham itself, following the termination, led to conclusions that remedial works were required to Block B. Block A seems, on the evidence, to have been in something of a hopeless state generally, and the decision was taken to demolish that in May ~~2016~~ 2016, as I have explained. It was obviously thought at one stage that Block B could be remediated, those works commencing as I have already explained. A couple of months after that work commenced however, the decision to demolish Block B rather overtook the progress of those remedial works.
12. Therefore, although it is effectively accepted by Canham that its drawings were in some respects negligent (based on the evidence of its own expert structural surveyor, Mr Owain Evans), liability per se was challenged in rather blunt terms. The Defence alleged that the Particulars of Claim represented “a gross distortion of the circumstances of the decision to demolish the two Blocks”. Canham stated that the foundations had not been constructed in accordance with the design it had prepared, and had been constructed by Foxdown to the earlier design drawings with shallower

depths shown on the Revision A version of the drawings. Canham also alleged that the two blocks, constructed by Beattie Construction (one of the three companies involved of which Mr Beattie was a director) were woefully defective – the term used in cross-examination was “catastrophic” in terms of the extent and type of defects present. A very long list of defects that could not be the responsibility of Canham was relied upon by Canham, essentially to make good the point that the blocks would have had to be demolished in any event.

13. It was asserted by Canham that as a result of the very poor administration of the project by Mr Beattie – again the word used was catastrophic – the quality of both the sub-structure and superstructure works at Block A, in particular, was so shockingly bad that it had to be demolished in any event. Block A was not the only block with problems. It was discovered that Building Control had not even been invited to inspect the Block B foundations prior to the concrete being poured, and so had not done so. This would be a clear breach of the building regulations, as Building Control is required by the regulations to inspect foundation footings before the foundations are constructed. It also was the case at the time that further, serious, defects in Block A were discovered during the process of demolishing it. The Defence asserted that so little of the entire structure of both blocks had been built as designed, and/or had been built so defectively, that the demolition of the blocks was inevitable regardless of the conditions of the foundations. Canham also relied upon the fact that BPN terminated the engagement of Beattie Construction under the JCT terms. Given Mr Beattie was involved in both those companies, that could be described as a curious factual situation. Remedial works were actually underway to the Block B foundations when a decision was taken to demolish that too, and even though causation is challenged, Canham allege that those remedial works (which were very limited, and would have cost about £10,000 only) would have been the reasonable solution for the admitted breaches of duty concerning the design.
14. Put in outline terms only, therefore, Canham challenges, as matters of fact, the following areas of the case brought against it by BPN and NPS:
 1. Causation.
 2. Reasonableness of the decision to demolish.
 3. Loss.
15. There were three witnesses of fact called in total. The claimants called Mr Hersey and Mr Gawthorpe, directors of NPS and BPN respectively, and Canham called Mr Evans. Although both parties had permission for expert evidence from geotechnical engineers, only Canham called such an expert, namely Mr Marychurch. Each side called its own expert structural engineer, namely Mr Hughes for the two claimants and Mr Owain Evans (no relation to Mr Evans of Canham) for Canham. Each side had a quantity surveying expert, and these experts had helpfully agreed quantum prior to the trial in the somewhat lower sum than that claimed, namely £1.4 million. However, in the event, Mr Higgins for Canham elected not to call any quantity surveying evidence, and therefore Mr McIver, the claimants’ quantity surveyor, was the only expert of this discipline to give evidence. Also, he was not cross-examined and therefore simply proved his report in evidence in chief, together with confirming his views as they were contained in the Quantity Surveyors’ Joint Statements.
16. There are other features of the case that should be recited by way of preliminary introduction. There is nothing wrong with a partner in a firm of solicitors signing the

Statement of Truth in a pleading; indeed, it is specifically permitted under CPR 22.1(6)(a)(ii). However, if claimants are companies, and their directors do not sign such statements, all that the Statement of Truth means is that the party putting forward the document believes the facts in that document to be true; this is stated in CPR 22.1(4). In this case, given that the Statement of Truth was made by the solicitor and not a director of one of the claimant companies, this probably explains why Mr Higgins for Canham chose not to cross-examine either Mr Hersey or Mr Gawthorpe in any great detail on the absence in the Particulars of Claim of any reference to Beattie Construction's varied failures of its own contractual obligations to BPN. He did, however, put the same points to them in terms of their evidence.

17. Secondly, the evidence of fact upon which both claimant companies relied was that given by Mr Hersey and Mr Gawthorpe. Their witness statements – which as is well known, stand as their evidence in chief – were extraordinarily light on significant detail. I deal further with their evidence in Part D below.
18. Thirdly, the parties seemed almost to be surprised that the trial had actually come upon them. This had the following effect. There were no fewer than four entirely different trial bundles. These were the Core Bundle; the Supplemental Bundle; the Supporting Documents Bundle; and the Remaining Documents Bundle. Each bundle contained multiple volumes. This regrettable failure to organise the trial documents correctly, and by agreement, caused a degree of difficulty in terms of efficiency. Both counsel were highly professional in dealing with the potential confusion and distraction caused by this failure of the necessary co-operation required by the parties and their solicitors in advance of the trial. However, such a state of affairs simply should not occur for any trial, and particularly not in a multi-million pounds professional negligence claim in a specialist list in the High Court. The transcription service was only arranged on 3.00pm on the very day before the trial started. This shortage of time again caused some difficulty in terms of organising and testing the necessary audio link. Nor could the parties agree a single list of issues, nor whether certain legal arguments were open to each other on the pleadings.
19. The very least that parties should be able to agree on, in advance of a trial, are the issues that the court is being asked to resolve; and what contemporaneous documents exist that might be pertinent to those issues. I will only identify and resolve these issues to the degree necessary to decide this case, but the state of the documents has made conducting the trial far more difficult than it should be. Parties should co-operate in such matters, and this is required by the overriding objective.
20. Finally, the trial commenced on 3 March 2021, with opening submissions and the oral evidence of fact of Mr Hersey and Mr Gawthorpe for the claimants. Both these gentlemen were cross-examined by Mr Higgins for Canham. The second day on 4 March 2021 saw the oral evidence of fact from Mr Evans of Canham. On 5 March 2021, a non-sitting day, a letter was sent from the claimants' solicitors directly to the court, addressed to me as the trial judge. In that letter, there was a lengthy explanation to the court addressing certain points that had been made by Mr Higgins in his earlier cross-examination of Mr Hersey and Mr Gawthorpe, together with argument in respect of those points. Some further disclosure was given by the claimants arising out of cross-examination on 3 March 2021, together with submissions based on a contemporaneous email that was produced. This document seemed to be part submission, part quasi-evidence, and part explanation.

21. Such a letter should not have been sent to the court. It was necessary to explain to the parties that I intended simply to ignore it, save and in so far as its contents may be repeated in closing submissions. There is no procedural place for sending such material directly to the trial judge during a trial itself in this way, attempting to meet or explain away evidential points made in cross-examination (which in procedural terms leads to evidence, namely the answers of witnesses to those questions) by way of a letter to the judge. Trials are conducted in open court. Open justice is a very important principle. Evidence is what is contained in witness statements, attested to by a witness, and either agreed by the parties or spoken orally in the witness box. Submissions are usually made at the beginning and the end of trials, and sometimes during the evidence, depending upon events. They are not, and cannot sensibly be, made uninvited directly in writing to the judge in letter form during the trial itself in the way adopted in this case. No further evidence of fact was adduced by the claimants after the day when Mr Hersey and Mr Gawthorpe were cross-examined. There was no additional evidence adduced by the claimants to correct what had been said. There were no exceptional circumstances that would have justified giving permission to allow this after Mr Evans of Canham had given his evidence, but whether there were or not, no application was made to call further factual evidence. For what it is worth, it is difficult to see what could have justified such an application in any event.
22. I make the following observation. It may have been the case, after Mr Evans of Canham had been cross-examined, that either Mr Hersey and/or Mr Gawthorpe came to the conclusion that they wished their own evidence had been different, or more comprehensive. I do not know if that is what transpired or not, but if that were the case, it might explain the letter sent to the court to which I have referred at [20] above. Given the conclusions that I draw about the evidence of each of those gentlemen, that is, at the least, a realistic possibility. In some cases, a skilled cross-examiner (which Mr Higgins undoubtedly is) may elicit evidence during a trial that a party had not expected would emerge at all. To use a phrase from Lewison LJ in *FAGE UK Ltd v Chobani UK Ltd* [2014] EWCA Civ 5 “the trial is not a dress rehearsal. It is the first and last night of the show.” Given the central issues in this trial of causation and the decision to demolish, each of Mr Hersey and Mr Gawthorpe may, after their cross-examination, have wished that they had properly and more fully dealt with these central issues in their evidence. That regret, however, does not justify sending a letter such as this to the trial judge.
23. The only submissions that I have taken account of in this case, therefore, are the written and oral submissions, both in opening and closing, by the parties’ counsel. The only evidence I have taken account of in this case is that contained in the witness statements, the oral evidence of witnesses including of course supplemental evidence in chief, their cross-examination and re-examination, and those points that were agreed. I have disregarded the contents of the letter of 5 March 2021, in so far as any part of that did not form part of the submissions made in the trial (written and oral) or the evidence.

B. *The Issues*

24. These are as follows:

Issue 1 – Reliance

1. Were the Cs (and their groundworks contractor) entitled to rely on the drawings and did they in fact do so? Were the Cs (and their groundworks contractor) entitled to rely upon any other information or instructions (including the instructions given by email in August and September 2014) provided to them by D as providing an instruction as to how to build the structural elements, including the substructure, of Block A and Block B, and did they do so?

Issues relevant to liability

Issue 2 – what was built

2. What did Foxdown in fact build in each of Block A and Block B respect of the substructure? In particular, in respect of:

2.1 Foundations (in terms of pad depths and founding levels, which the GIR report required to be 1 metre below existing ground levels or 0.2m into the Wadhurst Clay, whichever was the deeper, and which would need to be at least a minimum of 900mm deep under Building Regulations);

2.2 Dowels connections between (i) pads and ground beam; (ii) between ground beams and (iii) floor beams and ground beams;

2.3 Sleeper wall (connections and extent of wall);

2.4 Clay heave protection.

Issue 3 – what were the Claimants/Foxdown told to build

3. How does the as-built substructure in respect of (i) Block A and (ii) Block B compare to the information provided by Canham at the relevant time, including in the RevB drawings (204208-610-B for Block A and 204208-612-B for Block B) *and any further instructions from D in respect of each of the items above?* As part of the court's consideration of this issue, it is necessary to decide:

3.1 Whether Foxdown could and/or should reasonably have scaled off the AutoCad versions of the drawings, and whether they did in fact do so?

3.2 Whether Foxdown could and/or should reasonably have obtained information from other sources than the drawings and whether they did in fact do so?

3.3 Whether the Cs/Foxdown were entitled to rely on the drawings *and emailed instructions to them, which told Foxdown to construct pads to particular depths* and whether they did in fact do so?

Issue 4 – were the as-built substructures adequate

4. On the basis of the contemporaneous and expert evidence available regarding the as-built substructure of (i) Block A and (ii) Block B

4.1 was either substructure adequate? The issues for the court to consider include whether the substructure would be subject to excessive differential settlement.

4.2 If not, did the inadequacy arise from D's inadequate design and/or drawings *and instructions*?

Issue 5 – were the as-designed substructures adequate

5. *If the court finds that the as-built substructure differed from the as-designed substructure of (i) Block A and (ii) Block B, if the substructure of the Blocks had been built in line with that design, would either substructure have been adequate?*

Quantum and Causation

Issue 6 – scope of duty

6. From what type of loss did Canham owe a duty to hold the Cs' harmless? In particular:

6.1 Did D owe a duty to hold the Cs' harmless from economic losses arising from D failing to provide an adequate design for the substructure of Blocks A and/or B?

6.2 Is this a case in which the normal measure of loss in actions against contractors and construction professionals, being the "cost of cure", applies?

6.3 Could the cost of cure include the costs of demolishing and rebuilding either of the Blocks insofar as doing so was a reasonable way to remediate defects in Block A and/or Block B caused by D's inadequate design services (subject to causation – see below)?

In other words, is the cost of demolishing and rebuilding a loss that, in principle, falls within either of the limbs of Hadley v Baxendale?

6.4 Could D's duty include a duty to prevent the Cs suffering costs (i) paid to third parties and/or (ii) wasted as a result of D's breaches of duty?

Issue 7

7. In respect of remedial works:

7.1 What remedial works would have been required to rectify the defects in the substructure for which Canham is responsible in (i) Block A and (ii) Block B?

7.2 Taking into account the scope and likely impact of those works on the superstructure of (i) Block A and (ii) Block B, as well as any other matters the court decides is relevant (such as predicted cost, delay etc), was the decision to demolish and rebuild each Block reasonable?

7.3 On the basis of the above, what costs are the Cs entitled to recover in respect of the demolition and rebuild of (i) Block A and (ii) Block B?

7.4 What costs are the Cs entitled to recover in respect of their other heads of loss (Wasted Costs of construction, LADs, design fees)?

25. The italicised parts of the issues – including the whole of issue 5 – demonstrates wording that Mr Higgins submits does not arise on the claimants’ pleaded case. Ms White contends for the italicised wording to be included in the court’s consideration of the issues between the parties.

C. *The Two Claimants*

26. It is important to record that Ms White, who appeared for the two Claimants, did not settle the Particulars of Claim. That was pleaded by leading counsel from a different set of chambers to Ms White. Any defects in the pleading therefore cannot be laid at the door of Ms White. In that pleading, both BPN and NPS were said to have claims both in contract and tort against Canham.
27. Ms White rightly abandoned, in her written opening submissions, the claim by NPS for breach of contract against Canham. She did, however, seek to maintain the claim by NPS in tort against Canham, notwithstanding that Canham had entered into a contract with a different legal entity, BPN (the first claimant) and in respect of which NPS was only a shareholder.
28. The basis of this claim in tort by NPS directly against Canham was that instructions were said to have been given from personnel of NPS to Canham, and NPS had paid some of the invoices raised by Canham. In law therefore, Ms White submitted that Canham had a separate and effectively free-standing duty of care directly to NPS in respect of Canham’s performance as the designer.
29. Before the end of the instant trial, I had handed down judgment in a different case, namely *Multiplex Construction Europe Ltd v Bathgate Realisations Civil Engineering Ltd (formerly known as Dunne Building and Civil Engineering Ltd) and others* [2021] EWHC 590 (TCC). Both parties therefore made closing submissions in respect of this judgment, which concerned whether a Category 3 design checker engaged by a sub-contractor (Dunne) owed a duty of care directly to the main contractor (Multiplex). Dunne had full design responsibility to Multiplex, and was in administration. For reasons associated with Dunne’s solvency and the potential risk of non-recovery of any judgment against it, Multiplex proceeded directly against the checker, a consultancy called RNP (or more accurately, directly against RNP’s insurer). The issues concerning whether RNP owed direct duties to Multiplex were resolved as preliminary issues in that judgment.
30. I held in *Multiplex v Dunne* that RNP owed no direct duty of care to Multiplex. Multiplex had put its claim in tort under negligent mis-statement (relying upon the statements made by RNP in the design check certificates provided by it to Dunne) and also upon a free-standing duty of care said to be owed directly to Multiplex in respect of the design-check activities being carried out by RNP.
31. Part G of that judgment between [115] and [186] analysed the ways in which a duty of care could arise, both by way of assumption of responsibility (the route contended for in that case by the claimant Multiplex) and the three-part test in *Caparo Industries plc v Dickman* [1990] UKHL 2. I concluded that RNP did not owe a direct duty of care to Multiplex. I also stated that in the conventional construction project arrangement, with careful arrangement of contractual obligations, it would ordinarily be the

existence of contractual obligations that would govern the scope of responsibility of a design checker.

32. At [164] that judgment stated that “Although the existence of a contract is not entirely determinative, it is a highly relevant feature. In my judgment, the closer the situation under scrutiny is to a more conventional or habitual business-like relationship governed by contractual terms agreed by the parties, the less likely the law will be to answer the questions concerning assumption of responsibility and fairness, justness and reasonableness, in favour of a claimant such as Multiplex who has no contractual relationship with RNP.”
33. I consider the same analysis applies to this situation regarding the claim by NPS, a shareholder of BPN, that Canham owed it (NPS) a direct duty of care. The judgment in *Multiplex* considered the dicta of Lord Hoffmann at [14] in *South Australia Asset Management Corp v York Montague Ltd* [1996] UKHL 10, when he said that a duty of care “does not however exist in the abstract. A plaintiff who sues for breach of a duty imposed by the law (whether in contract or tort or under statute) must do more than prove that the defendant has failed to comply. He must show that the duty was owed to him and that it was a duty in respect of the kind of loss which he has suffered.”
34. Lord Hoffmann also cited with approval a similar statement from Lord Bridge’s speech in the seminal case, *Caparo Industries plc v Dickman* [1990] UKHL 2, [1990] 2 AC 605, at 627 where he had said:

“It is never sufficient to ask simply whether A owes B a duty of care. It is always necessary to determine the scope of the duty by reference to the kind of damage from which A must take care to save B harmless.”
35. Posing those questions here, and considering all the relevant matters, including those in the analysis set out at [172] of *Multiplex*, I find that Canham did not owe any duty of care directly to NPS. The fact that NPS paid some invoices, and also that some personnel sometimes used their NPS e-mail accounts (which all ended .nps) for some correspondence (rather than e-mail accounts for other companies) does not assist NPS in establishing a direct duty of care to it as a shareholder. Canham had a contract with BPN. Given the nature of the construction project, the services to be provided, and given that Canham was a professional firm of engineers providing design services for a construction project, there was a co-existent duty of care owed by Canham to BPN, in addition to its contractual obligations. However, there is no justification in my judgment to find that Canham, in addition to this responsibility to BPN, the party who engaged it contractually, also owed any of the constituent shareholders of BPN – namely NPS – a separate and direct duty of care.
36. Further, in this scenario, all that this conclusion means in this case is that any liability Canham may have for failures or breaches on its part is owed to the first claimant, BPN, who is, in any event, itself a party to the proceedings. There is no question of Canham escaping from liability for any actionable failures on its part as a result of my finding in [35] above. I do not know why NPS was joined as a co-claimant. It might simply be a further example of what appear to be idiosyncratic business relationships of the type referred to at [6] to [13] above, or there might be real reasons of substance concerning apportionment of financial recovery from Canham (if there is any)

between the two claimants. I do not know, there was no evidence about it, and it does not matter. This was an entirely conventional contractual arrangement between Canham and BPN for a construction project in which BPN was the main contractor. There is no just reason to extend the scope of Canham's responsibility wider than this, to include a separate duty directly owed to BPN's shareholders. Those behind NPS and BPN chose, for whatever reason, to conduct their business interests through the medium of a limited company, namely BPN. They cannot have it both ways and then, for some reason, properly avoid the consequences of choosing to do so, and construct an artificial direct duty of care to BPN's shareholders.

37. NPS has no proper separate claim of its own against Canham either in contract (a point accepted by Ms White in opening) or in tort. Accordingly, NPS' claim against Canham must be dismissed. The claim as a whole must however still be considered, as it is also brought by BPN. That claim survives this finding in respect of NPS. I shall still refer to "the claimants" where to do so otherwise would cause confusion. However, the only claimant that can properly advance a claim against Canham is BPN.

D: The Witnesses of Fact

38. In advance of hearing any evidence from actual witnesses, all that the court has available to it is the written witness statements from those individuals whom each party intends to call. Sometimes not all the intended witnesses of fact are called, and in those circumstances, if one has pre-read the witness statements (which has almost invariably taken place) the judge will simply put out of his or her mind the contents of any statements of witnesses who are not called (unless that evidence is agreed). This occurred in this case, and not all the witnesses who had served statements were called at the trial. I shall therefore only deal with the witnesses who were, in fact, called at the trial by either party.
39. Mr Hersey is the Chief Operating Officer (Consulting) of Norse Group Ltd ("Norse Group"). That company is not a claimant. Norse is the sole shareholder and parent of NPS, the second claimant, and a joint shareholder of BPN, the first claimant. Mr Hersey explained that he had been told by the Norse finance department that all of the invoices issued by Canham were paid either by NPS "through the Norse bank account" or from the NPS bank account. He also stated in his witness statement (although he did not provide the source of this knowledge) that "up to June 2015 there was only one bank account for Norse and all subsidiary companies" (emphasis added). This is an odd state of affairs, given limited companies are distinct and separate legal entities. Even on Mr Hersey's own evidence, some of the invoices were paid through the Norse bank account, and not from the bank account of NPS. I do not know, and it was not explained, why this collection of different companies should have organised their business affairs in this way. However, in my judgment it does not matter. It reinforces (if reinforcement were necessary) that the fact that NPS paid Canham's invoices does not impact upon the conclusion that Canham did not owe NPS a duty of care. The initial invoices were addressed to BPN and it is accepted that Canham and BPN had a contractual arrangement.
40. On the important question of why, and how, Foxdown had come to construct the foundations to a design other than that contained in Revision B of the drawings in 2014, Mr Hersey proved himself remarkably lacking in any curiosity or interest

whatsoever. Emails either sent, or copied, to him at the time in 2015 and 2016 showed that this must have been because Foxdown was not given the Revision B drawings. The earlier Revision A drawings, stamped received and issued for construction to Foxdown, are crucial evidence on what is an obvious and central point. Any claim for damages for negligent design ought, one would have thought, to have at least considered whether that allegedly negligent design was the one actually constructed. Yet even though Mr Hersey was told that Foxdown had constructed to the Revision A design (rather than the more robust Revision B design), he seemed somewhat unconcerned and/or disinterested. This lack of concern and disinterest was both at the time in 2015/2016, and when he prepared his witness statement, and also when he was giving evidence from the witness box in court. I doubt that it came as a surprise to him that the reason this had happened was because Foxdown had the earlier Revision A drawings issued to it for construction. Indeed, he must have known that this was the reason. Given the demolition of Blocks A and B led to further expenditure on the construction project measured in millions of pounds, one would have expected far more from Mr Hersey in this respect in terms of investigating, dealing with, and providing, at least *some* (or, indeed, any) cogent evidence about how this came to occur. The Revision B design of the foundations prepared by Canham was simply not the design of the foundations that were in fact constructed by Foxdown. However, there was no such evidence from Mr Hersey at all. Even when he was asked about it, his answers were extremely limited.

41. Mr Hersey had failed even to ask Mr Ron Beattie, a co-director of his, how it was that Foxdown (under the contractual relationship it had with Beattie Construction, another company of which Mr Beattie was a director) had come to construct the foundations to the design contained on the Revision A drawings, and not to the Revision B design. The foundations on Revision B were far more substantial, and had very different dimensions. Mr Hersey also could not say whether anyone else had asked Mr Beattie about this either. His actual answer was:

“Personally, I didn’t [ask Mr Beattie]. I honestly cannot recall whether anybody else in our organisation may or may not have tried.”

42. This behaviour is inexplicable, in the correct meaning of that word. I deal with this further in Part G of this judgment, dealing with causation and the decision to demolish.
43. Another point of considerable note is his failure to address, in any meaningful respect, in his witness statement the fact that Beattie Construction was replaced as the contractor. All that was said by Mr Hersey in his witness statement was: “at this point in time, the main contractor’s (Beattie Passive Construction Ltd (“BPC”)) employment had been terminated and, in BPC’s place, RG Carter Ltd were carrying out the works”. That is, in my judgment, an inadequate way to deal with such a major incident on any construction project, but particularly so here where one of the claimant companies, and the main contractor having their engagement terminated, shared a director, and where the contemporaneous documents showed that the works performed by Beattie Construction were so defective. These are telling omissions in the claimants’ evidence of fact. Anyone with any experience of the construction industry would readily accept that terminating the employment of the main contractor on a project is a rather significant event. It is particularly significant if the work that

main contractor had performed, prior to termination, proved to be so substantially defective. Giving that topic all of one limited sentence is, again, inexplicable.

44. I was not particularly impressed with Mr Hersey as a witness. He retreated behind advice given to him (and/or to NPS) by Birketts Solicitors at an extraordinarily early stage in his cross-examination. Such advice is, of course, privileged, and Mr Higgins quite properly did not seek to explore it, but when the decision to demolish - which is such an obviously central part of the claim against Canham – was being considered, far more is required (both in law, and evidentially) than that this was done after advice was taken from solicitors. The burden is upon the claimants (or BPN, given I have found that there is no proper basis for any claim by NPS) to demonstrate that demolition was caused by the breaches of duty on the part of Canham, and also that it was reasonable. In my judgment, Mr Hersey failed to achieve either of these essential evidential building blocks of the case.
45. Indeed, I was left with the impression that Mr Hersey was being extremely careful with his answers in some areas, in order to avoid any answers that could expose him to uncomfortable further questioning. However, he did make one important concession in respect of Block B. This was that the decision to demolish it was not due to failures in respect of its foundations. This was accepted by Mr Hersey in his oral evidence concerning Block B:

Q. So just so we are absolutely clear, nothing in relation to the substructure then -- once those investigations had concluded, there were no issues with the substructure which necessitated the demolition of block B because the pads were fine, the dowels had been retrospectively fitted or were being retrospectively fitted when the decision was taken?

A. Yes.

46. This is also consistent with the expert opinion of Mr Owain Evans (the defendant's structural engineering expert) in respect of the localised remedial works that were commenced, which he considered would have cured the problems with the Block B foundations, namely the retro-fitting of dowels. These connected the beams and the pads. They had been missed from the design by Canham (on both the Revision A and Revision B drawings), but this could be remedied by post-construction installation. These remedial works were actually underway at Block B when the decision to demolish it was taken. This expert evidence by Mr Owain Evans is substantiated by the answer given by Mr Hersey above.
47. Another point not in the claimants' favour was that Mr Hersey accepted there were serious flaws with Block B not connected with the foundations, although this acceptance was not entirely forthcoming when he was first asked about it.

Q. Mr Hersey, having established that there were no problems with the foundation to Block B, you mentioned after you were describing to his Lordship the other problems on Block B that it was structurally moving, was it not?

A. Yes.

Q. That was the superstructure moving and just so that we are clear you are not suggesting and have never suggested that that movement had anything to do with the foundations, are you?

A. I think from my perspective I was just relying on our consultant engineers' advice as to what the issue was.

Q. But nobody has suggested to you that the movement in the superstructure, which necessitated Block B's demolition, had anything to do with the foundations?

A. Not directly, no.

Q. Or indirectly?

A. No. The only thing I would say is that in my mind I was keen to exhaust what parts of the structure or the superstructure or the substructure to make sure that we fully understood what may be the contributory factors to the movement myself.

MR JUSTICE FRASER: Having done that, would you like to put your question again?

MR HIGGINS: Yes. (To the witness): Having done that, you were quite happy that none of those issues were related to the foundations?

A. That's correct.

48. This shows that these other serious problems were nothing to do with any breaches on the part of Canham. Again, this is consistent with the evidence of Mr Owain Evans, which was that although there were defects with the foundations of Block B caused by negligence on the part of Canham, these defects were not particularly serious and did not of themselves justify demolition.
49. The second witness of fact for the claimants was Mr Gawthorpe. He is a director of BPN. In his witness statement he had said that he agreed with Mr Hersey and sought to supplement and not repeat the issues that he had dealt with. Perhaps that was seen as justifying a witness statement containing an extraordinary lack of detail, which is what his written evidence constituted. He had included but a single sentence explaining that Beattie Construction's engagement had been terminated. All that he had said in his statement was:
- “On 27 August 2015, BPN served a notice on the Contractor terminating its employment under the Building Contract. This letter was sent from me, as director of BPN”.
50. Nothing was provided in his statement either about the reasons for this termination of Beattie Construction, or the very widespread incidence of construction defects that could not possibly be laid at the door of Canham. Nothing was stated in respect of the assertion by Canham (which had been clearly pleaded in the Defence) that Foxdown had not constructed the foundations as designed, either. Where causation is so fundamentally in issue, this is somewhat surprising.
51. Again, as with Mr Hersey, a heading was included in the statement that asked “What informed the Claimants' decision to demolish Blocks A and B, what additional issues, workmanship or otherwise, were encountered in the construction of the blocks, and

did they contribute to the decision to demolish?” (emphasis added). However, the emphasised phrase in that heading/question was a subject then almost completely avoided by Mr Gawthorpe in his witness statement. He entirely omitted any reference to the defects present in the construction that must have been the responsibility of Beattie Construction, and which were certainly not the responsibility of Canham. These were widespread, as shown in a great many of the contemporaneous documents.

52. There was therefore no reference in the text of the statement itself either to the lack of adequate quality of the works performed by Beattie Construction, or even the pleaded averment in paragraph 31(2) of the Reply that Beattie Construction had itself suspended its works prior the termination. Due to the clause in the JCT contract relied upon by Beattie Construction, that suspension was probably due to non-payment. The reasons for that non-payment were not addressed in any evidence from the claimant at all.
53. Mr Gawthorpe also deployed a technique in answering questions in cross-examination which was to rely upon the fact that, as he put it, he “couldn’t categorically say”. Of course, some allowance has to be made for people being cross-examined, who have given an oath or affirmation to tell the truth, the whole truth and nothing but the truth, and who may not be fully comfortable in the unusual setting of a court room. However, even making those allowances, I consider that Mr Gawthorpe was using this device to avoid answering uncomfortable questions.
54. The closing part of his cross-examination was as follows. Having put to Mr Gawthorpe the very considerable list of construction defects that were undoubtedly the fault of Beattie Construction, and nothing to do with the foundations, Mr Higgins turned to the issue of Foxdown constructing the foundations to the earlier, superseded design in Revision A which had been issued to it, rather than the later Revision B drawings with quite different depths and dimensions.

Q. And so when you learned on 18th April 2016 that in addition to this catalogue of errors somebody had failed to send Foxdown the correct construction drawings, you knew perfectly well who was to blame for that, did you not?

A. No.

Q. That is why you did not have to make any enquiries and you did not have to email anybody, did not have to instruct Birketts, for example, did not have to make any enquiries of anybody other than Ron Beattie because you knew that Ron Beattie, who was responsible for this catalogue of errors, was the obvious person who, in addition to everything else, had dropped the ball over the drawings being issued to Foxdown, was he not?

A. Are you suggesting that Canham Consulting hadn’t issued the drawings to Foxdown direct and they were issuing them through somebody else?

Q. That is exactly what I am suggesting. It is a matter of record that, as one would expect, Canham issued drawings to Ron Beattie and Benedict Binns, who were both of Beattie Passive, were they not?

A. Yes.

Q. Yes. And so you knew as early as this, April 2016, that, in fact, the reason these pads had been constructed so shallowly had absolutely nothing to do with anybody misinterpreting Canham's drawings. You knew, did you not, that the whole thing was because Ron Beattie and Benedict Binns had failed to issue Foxdown with the right drawings in the first place?

A. I can't categorically say.

Q. So when it is suggested in this court on your behalf, Mr Gawthorpe, as it has been, that that is the reason why these foundations were built so poorly, that it was because somebody was misunderstanding Canham's correct drawings, you knew that the real reason is that Foxdown were not using the right drawings, did you not?

A. I can't categorically say that.

Q. Well, I am suggesting to you that that is the case, but whether you can categorically say it or not, it strikes me, if I may say so, as a rather surprising answer. Are you denying that you did not know that that was the real reason why these pads had been constructed so shallowly and, if so, why did you not know that?

A. Can you repeat that question?

Q. Are you suggesting that you did not know at this stage that the real reason these pads had been constructed so shallowly was that Foxdown had issued the wrong drawings?

A. Have we got -- I would need to look back and to look at the drawing issues from Canhams, because there were a couple of revisions of these, weren't there?

Q. Two.

A. Yes, that's right, so I'm not sure in my mind of where the dates are for Revision A and Revision B. So that's why I don't feel as though I can comfortably say what you want me to say.

55. That was the end of the cross-examination. Because it was such an important point, I asked Mr Gawthorpe what he knew about what drawings or information had been provided to Foxdown. He said:

"To be honest, I don't know exactly what was provided to Foxdown directly myself. I would only be able to maybe look at the drawing register."

56. This shows a remarkable lack of interest on his part concerning any of the evidential features, or basis, of causation in the claim brought by BPN against Canham. Mr Gawthorpe's response to Mr Higgins above where he asked counsel "are you suggesting that Canham Consulting hadn't issued the drawings to Foxdown direct and they were issuing them through somebody else?" also shows a lack of awareness of how construction projects are ordinarily administered. Canham were engaged by BPN, and issued their drawings both to the architect (also engaged by BPN) and to

BPN itself. It was not Canham's responsibility either to issue information to Foxdown, or to supervise Foxdown's work in constructing the foundations to the design prepared by Canham. Mr Gawthorpe's evidence (and indeed the whole way the case is framed against Canham) seems to assume that because Canham designed the foundations, they were strictly responsible for everything to do with the foundations, including how they were constructed by Foxdown, and (where, as here, when constructed to the earlier superseded version of the design) the consequences of that.

57. I find that Foxdown constructed the foundations to the earlier, superseded design in the Revision A drawings, and not to the design as it was intended by Canham to be constructed which was contained in Revision B. The reason for Foxdown doing so was because Beattie Construction (and/or the architect) did not forward to Foxdown the Revision B drawings, and instead issued Foxdown the Revision A versions which were stated to be "for construction". There is nothing in the documents to suggest that Foxdown were at fault in terms of constructing to the Revision A version. Foxdown did what it was instructed to do. This was clear from the contemporaneous documents, and also from the factual evidence of Mr Hersey and Mr Gawthorpe.
58. I also find that in 2016, after Beattie Construction's contractual involvement in the project had been terminated by the letter from BPN (sent by Mr Gawthorpe), BPN were notified of a range of problems with the structures of both Blocks A and B. The overwhelming majority of these defects were structural and construction defects that could not have been, and were not, the fault of Canham. BPN was also notified by RG Carter, amongst others, that the wrong, earlier version of the design for the foundations had been used for construction by Foxdown. In an email of 18 April 2016 from RG Carter this was made clear. This email states:

"Please see the attached from Foxdown, sent last week.

We noticed on site on Friday with Rowland Smith from Carter that these are not the latest revisions of these drawings but are the ones issued to Foxdown for construction".

(emphasis added)

59. This email was forwarded on, with another email, by the architect on the same date. The addressee was Mr Evans of Canham, but both Mr Hersey and Mr Gawthorpe were copied in to it. Both Mr Hersey and Mr Gawthorpe have therefore known since April 2016 that Foxdown used the wrong drawings to construct the foundations. The forwarded email stated:

"Nigel

You need to be aware that pad foundations do not appear to have been constructed in accordance with your latest drawings 610 Rev.B....."

60. From that date, both Mr Hersey and Mr Gawthorpe clearly knew, on the face of the contemporaneous documents themselves, that Foxdown had constructed the foundations of both Blocks A and B to the earlier, superseded design in the Revision A drawings, and not to the design contained in the Revision B drawings prepared by

Canham and sent to Beattie Construction. Notwithstanding this, the Particulars of Claim that were served entirely omitted this important fact. The point was then clearly raised in paragraph 11.9 of the Defence, which stated the following:

“The Defendant will say that its foundation design would have been perfectly adequate for the loads and bearing pressures applied, had all the foundations been constructed in accordance with that design. As the Claimants well knew, they were not”.

61. This important point in the Defence was neither denied nor admitted by the claimants. Instead, the Reply at paragraph 17 stated:

“The allegations made in paragraph 11.9 are unparticularised.....”

62. I consider the failure by each of the claimants, of whom both Mr Hersey and Mr Gawthorpe are directors respectively, to admit the point raised in paragraph 11.9 of the Defence to be somewhat marked. Each of them must bear responsibility for that. The clear assertion is made that the foundations were not constructed as designed by Canham. That point was actually known by each of those directors, based on what they had been told in emails in 2016 into which they were copied, to be true. Yet it was swerved in the Reply, which stated that it was “unparticularised”. It plainly should have been admitted. Other than that, Mr Gawthorpe’s evidence suffered from the same lack of depth as that of Mr Hersey, and I find it was unreliable. I could not rely upon the factual evidence generally adduced by the claimants to any appreciable respect.

63. I turn now to the factual evidence on behalf of the defendant. Mr Evans (not to be confused with Mr Owain Evans, Canham’s expert structural engineer) is a director of Canham. He is a professionally qualified member of the Institution of Structural Engineers and the ECUK. He has a HNC in Civil Engineering and is a registered Professional Member of the Construction Skills Certification Scheme or CSCS. He manages a team of structural engineers, technicians and building surveyors.

64. Mr Evans’ subjective views on whether Canham were negligent or not in any of the respects identified by the claimants are of lesser assistance than the views of the expert structural engineers generally, and of Mr Owain Evans in particular (for reasons explained in Part E of the judgment). I found Mr Evans a broadly reliable witness, but there are two areas of note in respect of which particular explanation is required.

65. Firstly, he accepted that there were some deficiencies in the design prepared by Canham. The figure for the bearing pressure on the foundation drawings themselves was incorrectly given. The drawings stated 100kN/m (or kNm⁻²) whereas that figure should have been 150.

66. He attempted to excuse these faults (in relation to bearing pressure) by saying the groundworks contractor Foxdown would not have used bearing pressure as a primary reference when constructing the foundations. Rather they would have used depth, which was specified by reference either to actual depth, or depth into the Wadhurst clay, whichever was deeper. I accept that, because there is no evidence Foxdown (or any other groundworks contractor) would take or assess bearing pressures into

account in determining depth when excavating. A ground investigation report prepared by a practice called Listers prior to the works had identified that the foundations were to be excavated to a depth either of 1m below the existing ground level or 0.2m into the Wadhurst clay, the bearing stratum. This report is also referred to at [90] below. However, Mr Evans did not seem particularly abashed at the error in failing to state the correct bearing pressure, and simply referred to the incorrect bearing pressure being shown as “a typographical error”. 100kNm^{-2} is only two thirds of what the figure should have stated for bearing pressure, namely 150kNm^{-2} . This is a sizeable error for a structural engineer to make, whether it is a typographical error or not. There did not seem to be sufficient (or any) recognition by Mr Evans on this point.

67. Secondly, the drawings did not include upon them as a label the important dimension of depth of the foundations; this deficiency affected both the Revision A and Revision B versions. Mr Evans accepted this was a failure to exercise reasonable care and skill, but again sought to excuse this, and asserted that Foxdown could (and should) have used the autocad design drawings themselves (the .dwg files) in order to find out the correct depth themselves.
68. In my judgment, both of these points show a rather cavalier approach by the designer.
69. Thirdly, Mr Evans prepared, in answer to a Request for Further Information by the claimants, another drawing providing certain information. This was drawing 204208-1000-P1 which set out the ground beam general arrangement. This, again, did not include all the relevant information on the face of the printed out drawing, because, again, it had not been specified by label. However, it did at least show some consistency in terms of the failure by Canham to put all the relevant information from the CAD design on the face of a .pdf drawing. The answer to whether consistency in failing to label the .pdf drawings correctly, exercising reasonable care and skill, is a good thing or not is perhaps obvious.
70. Mr Evans also accepted that when Foxdown raised questions about depths of the pads in emails in August and September 2014, the depth which Mr Evans stated was included in the CAD design, namely 825 mm, was not provided by way of answer to Foxdown in the emails themselves.
71. He also accepted that no dowels were shown connecting the pads to the ground beams, something which Mr Owain Evans accepted was negligent and required remedial works to correct.
72. Mr Evans’ evidence of fact was of lesser importance given that both sides were calling their own structural engineering experts. I found his evidence broadly helpful and I accept that he was sincere in his answers. He certainly did not try and avoid uncomfortable areas of cross-examination. Of the failures I have identified – failure to include dowels; failure to label correctly; including incorrect bearing pressures – the most serious is the first. The other two could be described as being caused by lack of attention to detail, but this will be considered further below in setting out the structural engineering experts’ views.

E. The Experts

73. The only geotechnical expert who gave evidence was Mr Marychurch, who was called for Canham. The claimants did not call their own geotechnical expert, although they had permission to do so. I found Mr Marychurch's evidence to be reliable; although he was cross-examined, no alternative expert geotechnical evidence was put before the court. He has a B.Sc in geology and an M.Sc in foundation engineering, and is both a Chartered Geologist and a Chartered Civil Engineer. He is a member of the ICE and the Geological Society, as well as having other professional memberships such as being a Chartered Manager of the Chartered Management Institute. He has been the Managing Director of Card Geotechnics Ltd since 1999.
74. In general terms, Mr Marychurch considered that pad foundations were an acceptable option for the design as long as differential settlement was maintained within tolerable limits. He considered that the calculations performed showed that settlement would have been low and within acceptable limits. He found that the design in Revision B met the criteria set out in the Listers report in respect of depth of foundations, save for one row of foundations in Block A. He considered no anti-heave precautions were required, and that the Block B foundations had been constructed satisfactorily.
75. He was a reliable expert and had considered all the relevant material. His conclusions were not, in my judgment, rendered less reliable as a result of any of his answers in cross-examination. I accept his evidence. I will deal, when I go through the expert structural engineers' Joint Statement, with specific parts of Mr Marychurch's evidence as it arises in respect of specific points of relevance.
76. Mr Hughes was the claimants' expert structural engineer. He is a Chartered Structural Engineer qualified in both the UK and Ireland, with over 20 years' experience. He is both a Fellow and member of the Professional Conduct Committee of the Institution of Structural Engineers or IStructE. He is also a member of the Chartered Institute of Arbitrators. He is a member of Diales Technical, which is part of the well known Driver group that provides expert witness and other professional services.
77. Mr Owain Evans (not be confused with Mr Evans, Canham's witness of fact) is Mr Hughes' opposite number, and was called as an expert structural engineer by Canham. He is employed by William J Marshall & Partners LLP, a firm of consulting engineers and architects and he is a Chartered Engineer. He is a Member both of the Institution of Structural Engineers and the Institution of Civil Engineers, and he is a Fellow of the Chartered Institute of Arbitrators.
78. I consider that both these two experts are, in general terms, similarly and highly qualified. The experts had met and there were large measures of agreement between them contained in their Joint Statement. There were, however, areas on which they remained not agreed, not least concerning the amount of remedial works justified as a result of deficiencies in the design, and whether demolition was required. They were both extensively cross-examined.
79. I prefer the evidence of Mr Owain Evans in all respects where that differs from the evidence of Mr Hughes. This is for the following reasons:
1. Mr Hughes constantly embellished his criticisms of Canham, and, I regret to say, exaggerated. He has been subject to some strong criticism by Mr Higgins in Canham's written closing submissions in this respect, who described one part of his

evidence (where he was seeking to be more specific about breaches of Building Regulations and NHBC requirements) as “frankly farcical, descending into hysteria”. Mr Hughes had said:

“If you have one foundation failing you will end up with the structure becoming uninhabitable and you will have the building possibly falling down on top of people and injuring people.”

This evidence was somewhat extreme. There was no question, on the engineering evidence obtained at the time (not only by Canham, but by other consultancies such as MLM Consulting Engineers) of these “foundations failing”, nor was that issue even raised by the engineering experts in these legal proceedings. Potential structural failure would be a relevant consideration in terms of the decision to demolish, but was not even a pleaded allegation in this case. Structural stability of foundations and their integrity is obviously important, and failures in this respect can (in some extreme cases) lead to collapse and issues of risk to personal safety, and even death. However, these proceedings do not concern such matters, not even remotely, at least not so far as the pleaded allegations against Canham are concerned. The issue in respect of which Mr Hughes gave this answer was differential settlement of less than 5mm, something upon which Mr Marychurch had given expert geotechnical evidence, and which he had explained was well within acceptable limits. I accept Mr Marychurch’s more realistic evidence in this respect.

2. Mr Hughes constantly introduced new concepts or issues. One example of this is his distinction between two different types of Wadhurst clay of different colours, which is nowhere specifically identified as being an important distinction in his report, nor was this point even put to Mr Marychurch in cross-examination. I am confident that Ms White would have done so, had this been a live or relevant issue at the beginning of the second week of the trial when Mr Marychurch was called. The first time this was raised by Mr Hughes as a specific and important feature in any detail was in his oral evidence in the witness box, which was the next day. Another example was his explanation of why remedial works would not be suitable to timber framed structures. He said that repairing foundations to timber framed buildings would damage the structure, as the vibration and impact of the remedial works would cause the nails to vibrate and loosen. Again, this was new, and his report did not identify as a specific (or even general) point that demolition was required because timber structures would be damaged by repairs to the foundations. He appeared to be seeking to bolster the Claimants’ case.

3. Mr Hughes also, in cross examination, relied on material that, in my judgment, had no relevance to the issues under consideration in this trial. One single example of this is what occurred in respect of Approved Document A. He had generally referred in his report to breaches of Building Regulations. When questioned, he said those he intended to refer to were contained in Approved Document A, which is a document issued under the Building Regulations 2010. When asked in further detail about this, he answered questions in respect of thickness by reference to Table 10 in Approved Document A (a document not appended to his report, but of which the claimants’ solicitors had multiple copies pre-prepared and hence available). That table is headed “minimum width of strip footings” and has a cautionary piece of text below stating in express terms “The table is applicable only within the strict terms of the criteria

described within it”. Yet the foundations under consideration in this case are not strip footings at all, they are pad foundations with ground beams. They are of a different type to those specified in Table 10. Mr Hughes said that the same table would apply to pad foundations, but there is no relevant entry in Approved Document A that he identified in justifying this assertion. Nor would the text in the document cautioning against using that table other than “within the strict terms” support Mr Hughes in this respect.

4. Mr Hughes changed his agreement with, and reliance upon, the work of his associate Mr Baghi, whose report and work formed an appendix to his written report. Mr Baghi had concluded that the effect of eccentric loading upon the pad would not be significant enough to impact on the stability of any particular pad. Mr Hughes agreed that Mr Baghi had stated this, but said he disagreed with Mr Baghi. However, both in his written report and also in his confirmatory evidence in chief orally, he had expressly stated that he agreed with Mr Baghi. His report had stated “I have reviewed an expert report written by Mr Hooman Baghi of Diales and I agree with its findings”. For reasons that are not at all clear, he changed this during his cross-examination when he was taken to the specific finding by Mr Baghi in respect of eccentric loading. This suggests to me that because the eccentric loading point did not assist the claimants’ case, he disavowed it.

5. Mr Hughes agreed in cross-examination with Mr Owain Evans that clay heave protection was not required to the pads, but maintained that it would have been needed to some of the ground beams. The basis for this was wholly unclear, as he had not specified the extent of this in any detail in his report. The basis of his justification for this seemed to be that he, Mr Hughes, disagreed with Mr Marychurch’s evidence that the Wadhurst clay was of medium change potential. However, this is a geotechnical point in respect of which Mr Marychurch’s evidence is to be preferred in any event, due to the nature of the issue and the nature of Mr Marychurch’s specific expertise. However and in any event, this point had not even been put to Mr Marychurch when he was cross-examined, as it ought to have been. It is, however, an example of Mr Hughes going further than was justified in terms of his own expertise. He is qualified in structural engineering and was not called as a geotechnical engineering expert. Mr Higgins submitted that this demonstrates a lack of objectivity on the part of Mr Hughes, a submission which I accept.

6. Mr Owain Evans sensibly agreed with points put to him, whether they advanced Canham’s case or not. He had, in any event, already agreed in the Joint Statement that, in certain respects, Canham had been negligent. He approached his expert exercise applying, and his cross-examination demonstrated, a completely objective approach to the expert issues. The same could not be said of Mr Hughes.

7. Mr Owain Evans gave me the impression that his evidence would have been exactly the same had he been instructed by the claimants. Mr Hughes, regrettably, did not, and in my judgment, he constantly sought to advance the claimants’ case at the expense of expert objectivity.

8. Mr Hughes introduced a concept into his cross-examination of “maximum robustness”, when he was seeking to explain why localised remedial works of the foundations would not be sufficient. However, that is not the issue for the court, which has to consider reasonableness. Nor, in my judgment, is it the correct issue that

would or should have been considered by a designer of foundations for buildings such as these. Canham were not instructed to design foundations of “maximum robustness”. This concept appeared to have been introduced by Mr Hughes during his oral evidence for reasons of his own.

9. Mr Hughes also sought to defend the decision by the claimants to demolish both blocks, and maintained that this was required to remedy the foundations. This is notwithstanding the evidence of fact from Mr Hersey to which I have referred at [45] and [46] above. Experts should not take positions on contested issues of fact, a point that has been made in many cases, and one that is so obvious as to go without saying. Additionally, if a witness of fact makes a telling concession of this nature in respect of an important or central issue (here, the decision in respect of demolition and Block B), this is something that experts ought to take into account when they come to give their own oral evidence. The effect of such evidence ought at least to be considered. Mr Hughes did not change or alter his opinion in any respect after Mr Hersey gave the evidence I have referred to in respect of the foundations of Block B. He effectively ignored it, again (probably) because it was not helpful to the claimants’ case. Mr Hughes seemed to feel that he had to defend the decision to demolish the blocks as a result of failures on the part of Canham.

80. Further, Mr Hughes stated in his report that “it is specifically barred by Canham from scaling off a drawing in the drawing notes which is what using auto-cad would be doing”. To equate using auto-cad to obtain a measurement, with scaling off a drawing, is something which is said by Canham to be “patently incorrect”. I accept that description. In my judgment, it is completely wrong. These two activities cannot be equated in this way. It is also a red herring. It refers to the following issue. The drawings prepared by Canham did not include, written as a label on the .pdf drawings, the depth of the foundations. This is agreed by the experts as something that a designer should do, and it is also agreed that Canham’s failure to do so was negligent. The dimension showing depth should have been included on the .pdf version of the drawings themselves. By doing so, the groundworks contractor can simply look at the printed drawing and see the depth to which the foundations have to be constructed. They could not do so using these drawings, because that dimension was not labelled on the drawing.
81. That dimension was however available in the autocad digital drawings, in what is called Model Space. Model Space is an area included in the autocad programme. Digital drawings are files of type .dwg, rather than .pdf. If one were using the autocad programme, one could identify the depth dimension, as it would be included in what is effectively a 3D image within the .dwg file. The computer program permits someone to identify a particular dimension in that 3D design.
82. For whatever reason, interrogating the digital drawings in auto-cad to find out the depth dimension was equated by Mr Hughes, in his written report, to scaling off a drawing. This is simply wrong. Scaling off a drawing, and interrogating a digital drawing for a dimension that is included in that digital design, are completely different exercises. The former risks inaccuracy, and most, if not all, drawings will include a warning along the lines of the warning included in the printed drawings in this case. These expressly stated “CAD drawing not to be hand modified or scaled if in doubt ask”. A drawing that is an 2D image only will be in a .pdf file, which will have a suffix ending .pdf. A CAD drawing is usually, and was here, in a file of a

different type with the suffix .dwg. CAD means computer aided design. A file of type .dwg is a digital drawing. Asking the autocad program for a dimension included in the design (but not shown as a label on the .pdf drawing) is not the same as scaling off a drawing.

83. In Mr Hughes' cross-examination, he moved away from equating these two things, and accepted that measuring in Model Space was different to scaling, but explained some difficulties with it. He did, however, accept that "there was nothing problematic in itself" with using the measure tool in Model Space. This subject took up a great amount of time in cross-examination earlier in the case; Mr Evans of Canham had relied upon the fact that the dimension was available in autocad, and seemed to be critical of Foxdown for not interrogating the .dwg file to discover it, although he did accept the dimension should have been labelled on the .pdf drawing too. This led to some debate about whether sub-contractors could be expected to have laptops on site, as a computer is required to interrogate an autocad file.
84. However, and in any event, in my judgment Foxdown should not have been required, or expected, to do either of these things. This is why the debate in the evidence and in the trial about scaling off a drawing, or not, was a red herring. The dimension should have been identified on the face of the drawing; a point accepted by Mr Evans of Canham, and also by both the structural engineering experts. But if that dimension were missing as a label on the .pdf drawing – as it was here – Foxdown were both obliged, entitled, and expected to ask for that dimension to be provided by the designer. They ought not to be expected to interrogate the file of type .dwg for it themselves. Even if they did do this themselves, it would be sensible for Foxdown to ask or to check with the designer. Foxdown certainly did not become entitled to construct foundations to whichever depth Foxdown wished, simply because the dimension was missing from the .pdf drawing. They were obliged to ask for that information. This is, with respect to Mr Hughes, elementary.
85. The information was available on the design prepared by Canham. Canham would, had they been asked, have provided it. They did not do so because Foxdown did not ask. Nobody knows if that is because Foxdown were given another dimension by the architect; or whether Foxdown interrogated autocad, found the dimension, and ignored it; interrogated autocad inexpertly, and found another dimension by mistake, and used that one; or did not do any of these things, and chose their own level. All of these alternatives are possible in theory, and it is not necessary to speculate. Given Foxdown were constructing to an older superseded set of drawings, Revision A, which contained shallower depths in any event, the point becomes somewhat academic. This point is addressed further in Part G dealing with causation. I would simply observe that the fact that this lacuna is even present on the documents demonstrates that the supervision on site was not only less than ideal, but appears in some respects to have been entirely absent. This observation is supported by the fact that Building Control did not inspect the Block B foundations after they were excavated. This type of event should not occur on a well-supervised site. The drawings clearly state "if in doubt ask". Given the dimension that ought to have been included as a label was missing, then that would lead to doubt, which means Foxdown would have to ask. But to approach it as Mr Hughes did is to ignore what ought to have happened. None of it excuses Canham failing to put the required label on the

drawings, but it cannot be expanded to blaming Canham for Foxdown constructing the foundations to the wrong depth.

86. For all these reasons, I found Mr Hughes' expert conclusions, save to the extent they agreed with or were the same as Mr Owain Evans, to be of considerably lesser weight. For those reasons I prefer the evidence of Mr Owain Evans.
87. Turning to the quantity surveying evidence, the only quantity surveying expert called was Mr McIver for the claimants. He had agreed a large amount of evidence with his opposite number, who was not called by the defendant. The only expert evidence available therefore which was called at the trial was Mr McIver's report, and his views as they were included in the Joint Statements of the Quantity Surveyors. Mr Higgins did not wish to cross-examine Mr McIver. Mr McIver has a B.Sc in Commercial Management with Quantity Surveying and an M.Sc in Construction Law and Dispute Resolution. He is a qualified quantity surveyor and is also a member both of the RICS and the Chartered Institute of Arbitrators. He is an Associate within the Contract Solutions team at Arcadis in the UK. He had done a careful and thorough expert exercise and there was no challenge to his evidence, which I accept.

F. Negligence

88. The Joint Statement demonstrated that there were important areas of agreement between the structural engineering experts. There is therefore what is, effectively, admitted negligence on the part of Canham. It is not formally admitted on the pleadings but the evidence of Mr Owain Evans who was called for Canham makes it clear that Canham's design fell below the level of reasonable care and skill required in some respects.
89. This relates both to the failure by Canham to provide on the .pdf drawings the required label stating the correct (or indeed any) dimensions and depth of the foundations, but also (importantly) the lack of any dowel connections between beams and pad, and between ground beams and floor beams.
90. The areas of agreement in the Joint Statement that I consider to be important are as follows. I will not reproduce all of the points that were agreed, but the ones that are of the greatest relevance to the issues are:
 1. The Ground Investigation Report by Listers ("GIR") suggested foundations not greater than 1m in width, which suggests strip footings (point 7 of the Joint Statement). However, Mr Owain Evans considered that the GIR did not preclude the use of pad foundations and I agree. Mr Marychurch also agreed with this. Mr Owain Evans considered that pad footings were an appropriate solution provided they were designed properly, and I accept that evidence.
 2. It was reasonable for Canham to rely on the safe bearing capacity of 150kPa and the settlement figure of 25mm provided in the GIR (point 8).
 3. The allowable bearing pressure of 100kN/m² stated on Canham's drawings was not adequate for the structural design of the foundations (point 11). I would just record that Pa is the SI unit for pressure which is the same as N/m² (or Nm⁻²). Pascals and

N/m² are used more or less interchangeably throughout the Joint Statement, but they are both the same SI unit, one of pressure.

4. Canham should have provided on the drawing that the foundations should be installed to a depth of no less than 1m below ground level, or 0.2m below the top of the Wadhurst clay formation (point 13).

5. A number of the foundation pad depths shown did not comply with Building Regulations Approved Document A and NHBC Standards (point 17). However, Mr Owain Evans has identified that only 4 of the pad footings fell into this category, and those extended to a depth of 860mm below the final ground level rather than the recommended 900mm contained in the Building Regulations. He therefore concluded that the non-compliance was marginal and unlikely to result in any significant structural issues.

6. The bearing pressures under some pad footings exceeded the 150kN/m² advised in the GIR (point 19). However, Mr Owain Evans concluded that this did not mean that the settlement of the footings would be excessive, a point with which Mr Marychurch agreed. This also arose in respect of point 20, which was that the risk of differential settlement had not been reasonably mitigated by the size of the pad foundations. However, again, Mr Marychurch had considered the matter of differential settlement as a result and concluded that it was within acceptable margins. There was no competing geotechnical evidence adduced from the claimants in this respect.

7. There were some foundations where Canham did not correctly estimate the applied loads on the substructure and load paths through the structure (point 26). The consequences of this were, however, considered by Mr Marychurch who concluded that excessive settlement would not occur.

8. There were foundations that were eccentrically loaded (point 27) and the effect of this loading was not considered by Canham (point 28). This was in respect of only a limited number of pad footings and the consequences of this were considered by Mr Marychurch, and his conclusions were that reinforcement was not required.

9. Canham's design did not show a connection between the adjacent ground beams (point 30). Mr Owain Evans accepted that the beams should be connected to the pads, and if this were done adjacent ground beams did not need connecting to one another as well.

10. There was no steel dowel connection between ground beams and pads adequately specified on the Canham drawings (point 31). These should have been provided.

11. The Canham drawings should have indicated formation levels or pad depths on the paper drawings issued to the contractor (point 33). From the other evidence, what this means is that these dimensions should have been provided by way of label on the .pdf drawings.

12. Canham should have shown the setting out of the structural elements including the ground beams on the .pdf drawings. This was not done (point 34). However, the setting out was shown on the architects' drawings. I consider that this must have been done by the architects by using the setting out provided in Canham's design.

13. Any and all structural elements required by Canham to achieve their design should have been shown on the drawings issued by Canham (point 36). This included the dowel connections.

14. A connection was required between the ground beams and the pads and this was not specified by Canham (point 37).

15. The Canham drawings did not show the sleeper walls extending to the underside of the precast concrete floor (point 39) However, the architect's drawings did so. The contractor was therefore aware of this requirement.

16. There were several notes on the Canham drawings that were inaccurate, unclear or incomplete (point 40). These were notes 5, 6, 11 and 15. Note 5 referred the contractor to design calculations, and the experts were agreed that it was unreasonable to do so. Note 6 was the error to which I have already referred when dealing with Mr Evans' evidence of fact, namely that concerning bearing pressure, where the figure of 100kN/m² was stated and it should have been 150kN/m² (Mr Evans' "typographical error"). Note 11 was an irrelevant note referring to strip foundations, which was not applicable to this design of foundations at all, because they were not strip foundations. It should not therefore have been included at all. Note 15 was also irrelevant as it stated "In the event of clay soils being encountered on site, unknown to the engineer, the engineer is to be informed immediately". The whole site had Wadhurst clay as the underlying ground condition.

91. I consider that all of notes 6, 11 and 15 are symptomatic of a lack of care in preparing the drawings. Notes 11 and 15 look to me as though they were retained from other or earlier projects, or included as standard template notes. These two notes should not have been included at all.

92. It can therefore be seen that there are some aspects of negligence alleged against Canham where Mr Owain Evans agrees with Mr Hughes, and with the case advanced by the claimants. It is therefore necessary to turn to the issue of factual causation. It is not in issue whether Canham fell below the standard required of a reasonably competent engineer in the design of the foundations. It is accepted by their own expert structural engineer that they did in certain respects, a conclusion with which I am in agreement. It is the legal consequences of that failure, or those failures, that are important.

93. This is because the foundations as constructed were not the foundations as designed; and also because the problems with the foundations as constructed were not, by any means, the only defects present in Block A and Block B as constructed by Beattie Construction. There were a wide range of other construction defects that had nothing to do with Canham or the design of the foundations.

94. I find that the most relevant failure by Canham in its duty to exercise reasonable care and skill was that concerning the lack of connections between the pads and beams, which arise within points 30, 31, 36 and 37 of the Joint Statement. These connections were also referred to as dowels.

G. *Causation and the Decision to Demolish*

95. Given the factual situation concerning what Foxdown in fact constructed, the admitted negligence in some respects of aspects of the design by Canham, and the extent of the other defects present in both Blocks A and B that were not the fault of Canham, the real battleground in this case is one of factual causation. Indeed, I agree with Mr Higgins for Canham, who submitted that the whole core of the case concerns factual causation.
96. Mr Hersey's first witness statement dealt with the requirements of Practice Direction 51U. His second witness statement was therefore the only substantive written evidence from him, and it was somewhat sparse, being 14 pages long. Mr Gawthorpe's statement was even shorter, namely 7 pages long. Quantity should not be equated with quality, but both statements simply glossed over (or wholly ignored) the very real difficulties that were encountered with the other workmanship issues on the two blocks, which were clearly raised in the Defence. These other defects were the responsibility of Beattie Construction, which may be why both Mr Hersey and Mr Gawthorpe chose to ignore them. Indeed, notwithstanding the heading in his own witness statement where Mr Hersey posed the question "What informed the Claimants' decision to demolish Blocks A and B, what additional issues, workmanship or otherwise, were encountered in the construction of the blocks, and did they contribute to the decision to demolish?", this was a subject almost completely avoided by him in the passages of his written evidence that followed that heading. Nor was any evidence provided by him in his written evidence about the reasons for the termination of Beattie Construction, or the very widespread incidence of defects that could not possibly be laid at the door of Canham. Nor was anything stated in respect of the assertion that Foxdown had not constructed the foundations as Canham had designed them. Where causation is so fundamentally in issue on the pleadings, this is (putting it at its lowest) surprising. It is certainly an absence of direct evidence on a very important area of the case, if not on the central issue in the case.
97. As I have noted above in Part C, Mr Gawthorpe also dealt in his statement with the termination of the contract of Beattie Construction, but again, in extraordinarily limited detail. Nothing was stated at all in this written evidence about the defects which the contemporaneous documents record as being present. His statement in this respect was as follows:
- "On 27 August 2015, BPN served a notice on the Contractor terminating its employment under the Building Contract. This letter was sent from me, as director of BPN".
98. This wholly omits any detail at all. It fails to address what the correspondence itself shows, namely that Beattie Construction itself suspended works and then had its engagement by BPN under the JCT contract form terminated. Given there was at least one director in common between both BPN and Beattie Construction, namely Mr Ron Beattie, this absence of evidence or further explanation is most surprising. Mr Gawthorpe in his oral evidence said that the termination was due to "procedural matters". This refers implicitly to the JCT contract conditions that permit termination under certain circumstances not connected with the quality of work. However, this statement almost raises more questions than it answers. Given Mr Ron Beattie was a director both of BPN and Beattie Construction, the brevity of evidence available in respect of BPN terminating Beattie Construction's employment does not begin to address, or explain, the very real issue of Beattie Construction's defective work.

99. In the ten short paragraphs that followed under the same heading as in Mr Hersey's statement "What informed the Claimants' decision to demolish Blocks A and B, what additional issues, workmanship or otherwise, were encountered in the construction of the blocks, and did they contribute to the decision to demolish?", there was no evidence at all from Mr Gawthorpe about the "additional issues, workmanship or otherwise", still less about their impact on decision making. The defective work of Beattie Construction undoubtedly existed, as demonstrated by Mr Hersey's admission that the superstructure of Block B was actually moving, for reasons unconnected with the foundations.
100. Given the factual issues in the case, these central omissions in the evidence from the claimants were notable. I remind myself of the burden of proof, and I also remind myself that speculation is not permitted in terms of what other evidence there might be, that was not called by either side. However, here, the claimant companies are positively asserting that failures by Canham led to the decision to demolish the blocks, or (by the time of closing submissions) that at the very least, the breaches by Canham were effective causes of the need to demolish the blocks. Such assertions do require evidence to substantiate them. When there is other material available from contemporaneous documents that demonstrates that there were other substantial issues of defective works to both blocks, which were the responsibility of Beattie Construction, the absence of any positive evidence from the claimants on this becomes even more marked.
101. Mr Higgins, with commendable focus and skill, wasted little time in establishing with each witness called by the claimants, Mr Hersey and Mr Gawthorpe, that there were whole swathes of important evidence, of which both men were plainly aware, which had simply not been touched on in their written statements. In particular, the existence and extent of defects caused by Beattie Construction (or other sub-contractors), which was not the responsibility of Canham, was very considerable. That important evidence was not included in their witness statements because it appeared to be unfavourable to the claimants' case.
102. Ms White, in her closing submissions, made the point that Canham were, effectively, seeking to establish a break in the chain of causation, and therefore the burden of demonstrating this was upon Canham, and that burden had not been discharged. I do not accept that as an accurate characterisation of the case. BPN has to establish, at least prima facie, that the losses it says it is entitled to recover had been caused by breaches on the part of Canham.
103. The evidential areas that were most important to the case as a whole, that were lacking in the claimants' factual witness statements in any meaningful detail, were as follows:
1. Foxdown's failure to construct the foundations designed by Canham contained in the Revision B drawings, and the construction of those foundations by Foxdown to an earlier superseded design contained in Revision A.
 2. The failure of supervision by the different entities on site that this represented. Mr Gawthorpe's question back to Mr Higgins when asked about this, when he said to Canham's counsel "are you suggesting that Canham Consulting hadn't issued the drawings to Foxdown direct and they were issuing them through somebody else?"

demonstrated in my judgment that he considered Canham to be responsible for this failure by Foxdown (or by the supervising architect) in any event. I have also dealt with this at [56] above.

3. The fact that Building Control were not given the opportunity to inspect, and did not inspect, the Block B foundations at the stage when they were excavated and prior to the concrete being poured.

4. The widespread and serious defects in the other work constructed by Beattie Construction, including (but not only) that the superstructure of Block B was found to be moving for reasons not connected to the foundations.

5. The relationship between Beattie Construction and BPN, and the decision taken by the latter to terminate the former's contractual engagement. The complex or detailed decision making that must have taken place (given Mr Ron Beattie was a director of both companies) was entirely ignored. This omission may have been related to the issue to which I have already referred, namely Beattie Construction's quality of work. It may have been for other reasons. It is not necessary to speculate on any of this. Beattie Construction itself suspended performance of the works prior to the termination. This too was not dealt with in the evidence.

6. The discovery of other defects that were present in Block A as it was being demolished. Contemporaneous documents demonstrate that any confidence there might have been in Block B gradually diminished, as more and more work was discovered to be defective in Block A. There plainly was some confidence in Block B in about May 2016, as the localised remedial works to the Block B foundations actually commenced. By September 2016, a decision had been taken to demolish Block B too. Nothing further was discovered about the Block B foundations after those remedial works had started that would, of itself, justify or explain demolition. The period between May 2016 (when it was decided to perform localised remedial works to Block B) and September 2016 (when it was decided to demolish Block B too) is the period when Block A was being demolished. The foundations of Block B had not changed during that period. The state of knowledge concerning the type of defects present in Block A had, however, been advanced.

104. One central point on causation which appeared to be entirely overlooked, or glossed over, in the claimants' evidence of fact was that Foxdown had not constructed the foundations to the design prepared by Canham in the Revision B drawings. Ms White attempted to make this good in her closing submissions by shifting the focus on to contemporaneous emails sent by Canham to Foxdown directly in 2015 where some dimensions were given by Canham which provided thickness of foundations. She sought to equate this information with the *depth* of the foundations, which she said was either the same as thickness, or could be calculated from other information to give the depth. I reject that approach to the case for the following reasons:

1. Mr Higgins for Canham has some justification in his objection that this way of putting the case was simply not pleaded. These emails are not included in the claimants' own pleaded definition of what the design produced by Canham consisted of.

2. The emails are plainly, on their own terms, provided to Foxdown so that Foxdown could prepare its own pricing. I accept Mr Evans' explanation that this was why the emails were sent, but the same point can be made by reading the whole string of emails in context.

3. The emails equally plainly only deal with thickness. This is entirely understandable and justified given point 2 above, and in any event demonstrates that the emails do not deal with depth of foundations, and they cannot properly be read in that way. Depth of foundations, and their thickness, are two entirely different dimensions.

4. Ms White's case in this respect was not only not pleaded, but positively contrasted with the Reply where in paragraph 31(3), dealing with causation, the claimants themselves (again supported by a Statement of Truth) had stated the following:

"However, as to the depths and thickness of foundations, (a) it is denied that the Defendant specified depths for the foundations (as set out above) and (b) as to thickness of foundations, it is averred that no or no adequate dimensions were provided on the Defendant's drawings and that dimensions provided in its email of 11 August 2014 were incomplete." (emphasis added)

5. That pleading made a distinction between depth and thickness; to equate those two is contrary to that pleaded case (and, in any case, wrong). Further, the Reply stated that the email information was "incomplete", and Ms White's new argument in closing submissions was different, maintaining that it was positively incorrect. The argument is therefore not only not pleaded, it is directly contrary to what *was* pleaded.

105. No application to amend was made by the claimants, but the argument has no realistic prospect of success in any event. Depth and thickness are different characteristics or features of foundation design. I would not have given permission to amend, had such an application been made. However, and in any event, even if the argument had been pleaded, it would fail.

106. Causation is a highly fact sensitive arena. In *County Ltd v Girozentrale Securities* [1996] 3 All ER 834 the Court of Appeal overturned a finding at first instance by Waller J (as he then was) where he dismissed a claim by a bank against brokers in respect of a rights issue. Although the brokers were in breach of contract, the judge had rejected this as causing the loss alleged, because he concluded that there was another cause of greater potency for which the brokers were not responsible.

107. The Court of Appeal allowed the appeal. Beldam LJ stated that "such an approach is in my view incorrect". He explained that the issue was whether the breach by the brokers was an effective cause of the loss. He added (at 848):

"the fact that unforeseeable events combine with the breach to cause loss cannot alone be a sufficient reason for a decision that the unforeseeable events have superseded the breach of contract as the cause of the loss. The effects of the breach of contract may continue though other causes combine to produce the final result".

108. The judgment of Hobhouse LJ also considered the question of whether the brokers' breach was a cause of the bank's loss. He made two further observations at 857 and 858. The first was that Latin maxims that had been used in earlier cases had the

capacity to mislead, and should not be used. The second was that “conduct which contains no element of fault will not without more be treated as a cause in law.....It is often said that legal causation is a matter of fact and common sense. Causation involves taking account of recognised legal principle but, that having been done, it is a question of fact in each case”.

109. The dicta in that case have been applied many times at appellate level and below. The question which must therefore be asked in this case is this. Was the breach of contract by Canham an effective cause of the loss suffered by BPN? That question must be posed in relation to each of Blocks A and B. The answer need not necessarily be the same for each block.
110. The approach in *County Ltd v Girozentrale Securities* is matched by dicta in other cases concerning causation, which is highly fact sensitive. In *Supershield Ltd v Siemens Building Technologies FE Ltd* [2010] EWCA Civ 7, the Court of Appeal considered an appeal from Ramsey J in a judgment dealing with a flood that had been caused to the new office building constructed in the City of London for Slaughter and May, a well known firm of solicitors. Siemens settled all the claims up the contractual chain and pursued Part 20 proceedings against Supershield, who had been engaged on a sub-contract to install a sprinkler system. The judge found against Supershield, as he found the probable cause of the flood was a failure of a connection in part of the equipment in a storage tank, and this was because of a lack of sufficient tightening of a nut and bolt connection. He found that Supershield had an obligation both to install the piece of equipment, and carry out any adjustments necessary to ensure it was operating correctly. He gave judgment for Siemens in the amount of the settlement sum with the other parties, having found the settlement reasonable. An associated issue causing the flood had been a blockage in the drainage system, for which Supershield had no responsibility. Notwithstanding this, Ramsey J found that the connection failure caused the loss.
111. In the judgment by Toulson LJ (as he then was) the following was stated:
- “[32] On the question of causation, Ramsey J considered that the overflowing of water from the sprinkler tank which resulted from the failure of the connection between the ball valve and lever arm was an effective cause of the flood. The blockage of the drains did not take away the potency of the overflow to cause damage, but rather failed to reduce it.
- [33] I see no error in that approach. On the contrary, it would have been a rash lawyer who would have advised Siemens that it was likely to succeed on the causation issue, let alone that it could be confident of doing so.”
112. In *Greenwich Millennium Village Ltd v Essex Services Group Ltd* [2013] EWHC 3059 (TCC) Coulson J (as he then was), when considering causation, stated that (at [176]) “A distinction should be drawn between cases where there are two concurrent independent causes of the loss, dealt with above, and those cases where there are two co-operating causes, that is to say situation where two causes give rise to the loss but where each, on its own, would not have done so.” The instant case is not one of two concurrent and independent causes of the loss. The cause of the loss suffered by BPN in demolishing and rebuilding each of Blocks A and B was the defective nature of the structure in both cases, caused by failures by Beattie Construction and/or its

subcontractors. For Block A, it was also the defective nature of the foundations, but they had not been constructed in accordance with the design produced by Canham in any event. In Foxdown's case, it would be unfair to make any finding adverse to Foxdown that it was at fault in constructing to the Revision A design, because these drawings were clearly issued to it "for construction". That was not the fault of Canham.

113. Causation was considered by the same judge in *McGlinn v Waltham Contractors Ltd (No.3)* [2007] EWHC 149 (TCC). In that case, Mr McGlinn – who was an extremely wealthy individual, having been the co-owner of the Body Shop group of companies – decided to demolish his newly constructed house, Maison d'Or, in St Aubin, Jersey. The house, which Mr McGlinn considered to be very badly designed, and very badly constructed, sat empty for three years whilst it was decided what was to be done. The house was subject to extensive investigation and was never lived in, nor was it ever rebuilt. The judge decided that the majority of the defects that were present were unconnected with the structural soundness of the house itself. At [813] to [815] he considered the nature of the defects, and found that demolition was in that case "an extreme course". He stated (at [814]):

"If such a course of action is to be justified at all, it will ordinarily be because the building is dangerous or structurally unsound. That was simply not the case here."

In the instant case, the blocks *were* structurally unsound, but not as a result of anything that was defective with the foundations designed by Canham. The two blocks were structurally unsound because of the considerable amount of defective work, unconnected with the foundations (and hence unconnected to any breaches by Canham), which had been performed by Beattie Construction. One example of the grossly defective nature of the work is the damp proof membrane which is explained further in [128] below. I can do no better than quote the dicta of HHJ Newey QC in the well-known Great Ormond Street Hospital case, *Board of Governors of the Hospital for Sick Children v McLaughlin & Harvey plc* (1987) 19 Con LR 25, 96, cited with approval in *McGlinn* at [834]:

"However reasonably the plaintiff acts, he can only recover in respect of loss actually caused by the defendant. If, therefore, part of a plaintiff's claim does not arise out of the defendant's wrongdoing, but is due to some independent cause, the plaintiff cannot recover in respect of that part."

114. This passage is based on the classic case of *The Liesbosch* [1933] AC 449. In the instant case, the "independent cause" is the defective work of Beattie Construction. Nor do I consider any different result is obtained if the matter is approached as a breach of duty by Canham, rather than a breach of contractual obligation. On the facts here, the reason for demolition was the work of Beattie Construction, and not the negligent design of the foundations by Canham.
115. Turning to reliance on expert advice, BPN was not specifically advised that it was necessary to demolish Block B as a result of the defects with the foundations. Reasonableness of reliance on expert evidence to demolish is not present. Indeed, a decision was taken on professional advice that localised repairs (the installation of the required connections, or dowels) could be performed and this would remedy this defect. This work was underway when the decision to demolish Block B was taken. A

claimant carrying out either repair or reinstatement is under a duty to act reasonably, both in relation to the primary assessment of damages and in relation to the mitigation of damage; *McGlenn v Waltham Contractors Ltd (No.3)* [2007] EWHC 149 (TCC) per Coulson J (as he then was) at [844] to [848]. It was not by way of mitigation of any damage caused by Canham that the decisions were taken by BPN to demolish each of the blocks.

116. Returning to the point at [102] above, and the evidential burden, my findings are as follows. BPN must demonstrate both that the demolition was required as a result of the negligent design of the foundation, and also that the decision to demolish was reasonable. BPN must first discharge that burden. It has failed to prove both of those essential points. This is for the following very simple reasons. Firstly, there was far more defective with *both* Block A *and* Block B than their foundations. Secondly, the foundations as designed by Canham were not the foundations as constructed by Foxdown, because Foxdown was given the wrong drawings for construction. Foxdown had used the Revision A design for construction; these drawings were issued to Foxdown “for construction”. There were substantial differences between the Revision A and Revision B designs. Thirdly, BPN has failed to show that the demolition was required as a result of the defective foundations on either of Block A and/or Block B, although the factual history is different for each of these blocks. Fourthly, the lack of connections between pads and beams which were negligently omitted by Canham on both the Revision A and Revision B drawings could have been remedied by localised remedial works to Block B. Indeed, this work was initiated at Block B in May 2016. The decision, after that, to demolish Block B was taken as a direct result of what was discovered to be wrong with Block A during its demolition, and also as a result of further consideration of the structure of Block B as a result. The condition of the foundations of each of Block A and Block B was not an effective cause of the decision to demolish each of those blocks. The fact that the Block A foundations were far shallower than designed, even if an effective cause of the decision to demolish Block A, cannot be laid at the door of Canham because that was the fault of Beattie Construction or other entities involved in the construction of Block A, and not the fault of Canham.
117. Further, the professional advice from others (not Canham) such as MLM which BPN had at the time, did not suggest that demolition of Block B was required as a result of anything wrong with the foundations as designed, or even as they were constructed. Remedial measures were not only available for the Block B foundations, they had actually been initiated and were partially underway when the decision to demolish Block B was taken.
118. There are two ways of considering the situation that unfolded. They both lead to the same result, and both of these ways can be applied to each of Block A and Block B separately. The results in respect of the two blocks do not automatically have to be the same.
119. I start with Block A. Canham prepared the design for the foundations firstly in Revision A, and then in Revision B. The foundations dimensions in Revision B were far more substantial; and the pads were of much greater thickness. Both revisions omitted the connections between pad and beam.

120. However, Foxdown did not construct the Revision B foundations. They do not appear even to have been given that design. They constructed the Revision A foundations. The pads were sufficiently inadequate that this could not be remedied by retro-fitting connections. Further, the whole of Block A was so defectively constructed in other respects, nothing at all to do with fault on the part of Canham, that in order for BPN to comply with its own obligations to Hastoe Homes, the block (including its foundations) had to be entirely demolished, and rebuilt. The negligent design by Canham was not an effective cause of the requirement to demolish Block A.
121. That can either be expressed as the breaches of contract not being an effective cause of the loss (the statement which I consider to be correct); or it can be expressed (less accurately) as the construction of the foundations using Revision A design and the defective construction of the entire block being breaks in the chain of causation. That latter way of putting it is the method of analysis urged upon me by Ms White. I consider it to be incorrect, but even if I am wrong, then those matters plainly would be breaks in the chain of causation. Further, approaching the matter as a breach of duty rather than a breach of contract does not lead to a different answer in terms of causation.
122. Turning to Block B, the Revision B drawings for that block similarly omitted the connections, as did the Revision A drawings. Entirely fortuitously, because the dimensions of the foundations for Block B did not appreciably change between Revisions A and B (unlike the design for Block A), the fact that Foxdown used Revision A did not lead to substantially defective foundations. The foundations as constructed did, however, not contain the required connections, and this was the result of the failures by Canham to include these. These breaches by Canham were an effective cause of Block B requiring localised remedial works (not demolition) by retro-fitting the dowels. These works were commenced but not finished. During those works, the decision was taken to demolish Block B. That decision was not connected with the condition of the foundations as constructed. The breach by Canham was not an effective cause of the loss sustained by demolishing Block B and rebuilding it. Indeed, it was no cause at all. The cause of the loss was the wholly defective construction of the whole of Block B including its structure. It would have required demolition in any event, regardless of the state of the foundations. However, the breach by Canham was an effective cause (indeed, it was the only cause) of the works being required to retro-fit the dowels.
123. Even if Canham have the evidential burden of demonstrating that the chain of causation was broken, in my judgment they would have discharged that burden. However, there is no chain of causation, in my judgment, on the highly unusual facts of this case, because Foxdown never constructed the foundations as they were designed by Canham. It is not that the negligence of Canham was an effective cause of the damage suffered by BPN that led to the decision to demolish – the negligence of Canham was no cause at all of the demolition, either for Block A or Block B. For Block A, neither the defective foundations as constructed by Foxdown, nor the decision to demolish, were in any way taken as a consequence of any breach of duty or contract by Canham.
124. Block B is factually different for this reason. Foxdown constructed the foundations of both Blocks A and B to the Revision A drawings. The design for Block A foundations was changed by Canham in the Revision B drawing substantially, and the dimensions

of the pads in particular were far more substantial in that later revision. The design for Block B foundations in Revision B form, did not increase the dimensions for the pads for that block. Accordingly, Foxdown's construction of the foundations for Block B was not substantially different than it would have been had it been using Revision B.

125. However, on neither Block A nor Block B were there any dowel connections shown, either on the Revision A or the Revision B versions. This omission is agreed by the two structural engineering experts to have been negligent by Canham. Accordingly, if Canham had included dowels in the design, as it ought to have done, these would have been constructed on the Block B foundations by Foxdown, notwithstanding Foxdown's use of the earlier Revision A design. That means that the failure by Canham to specify the dowel connections in the design was operative as an effective cause of the localised repairs that were required to Block B. The same conclusion does not apply to Block A, as that block was so hopelessly constructed in so many different respects that the decision to demolish was, effectively, inevitable.
126. Not so with Block B. Yet further, the remedial works required to retro-fit the dowel connections were not only required as a result of the negligence of Canham in failing to include these connections in the design, but these works were actually underway and had been partially performed. This work was being done when the decision to demolish Block B was taken. That means that BPN has actually suffered a real loss, namely the cost in fact expended on those partially performed remedial works to Block B. The fact that the repairs were never finished, because the subsequent decision to demolish Block B superseded those works, does not affect that analysis.
127. The cost of that work was abortive in the sense that the later decision to demolish Block B meant the foundations, only partially remedied (by the retro-fitting of some, but not all, of the connections), were destroyed in that demolition, and the whole of Block B was then rebuilt. But the cost of those partial repairs to the pre-demolition foundations is a real, not a notional, loss suffered by BPN, and it has occurred as a result of the negligence of Canham in omitting the connections from the design.
128. The decisions to demolish firstly Block A, and then subsequently Block B, were entirely rational decisions when looked at from the point of view of BPN's business interests. Mr Gawthorpe explained that "the client" – by which he meant Hastoe Homes – was becoming frustrated with the delays that were being experienced, and he also knew that the work that Beattie Construction had done was extremely defective. As one example only, in one of the blocks, the damp proof membrane or DPM had been installed *below* ground level. Given DPMs operate by means of the membrane preventing dampness from the ground rising through the walls of a structure, to have installed a DPM in the position it was in fact installed here, not only demonstrates abject incompetence on the part of the installer, but similarly abject incompetence on the part of whoever was supervising that work. Mr Higgins also put to Mr Gawthorpe that in addition to its inadequate location, the DPM was (as Mr Higgins put it) "completely shredded". Mr Gawthorpe agreed that it was "shot". By each of those terms, they meant that its integrity as a membrane was wholly flawed due to damage to the membrane itself. There were other structural issues too. The superstructure of Block B was actually moving, a point accepted by Mr Hersey.
129. In my judgment, the decision to demolish Block B was nothing to do with the condition of the foundations, or their design. The decision to demolish Block B was

consequential upon what had been discovered more comprehensively to be wrong with Block A, as the state of knowledge increased as it was demolished. It was also influenced by other features and defects, such as the superstructure of Block B having been found to be moving.

130. Mr Higgins sought to persuade me that, at the most, this was a case where nominal damages (in the legal sense) were all that BPN could recover, due to the demolition of the two blocks being in no way caused by (or nothing to do with) the negligence of Canham. I accept the submission that the demolition was not caused by the negligence of Canham. I do not however accept the submission that this is a case where nominal damages should be awarded. This is not a case where there has been a merely technical breach of obligation that has had no effect upon the innocent party.
131. I do, however, therefore have to assess the evidence as it is, in terms of the financial cost of those limited remedial works to Block B that were not completed. It is not a large figure. The Joint Statement of the Quantity Surveyors agreed that the whole of those works on Block B would cost £4,000; it is also agreed that the works were partially performed only, and not completed; it is also agreed that it was during those works that the decision to demolish Block B was taken, and that is why dowel connection works were not completed.
132. Canham point out that the claimants have only pleaded recovery of the expenditure incurred by the demolition and rebuilding of both Blocks A and B, and there is no alternative claim seeking this cost of partial repair. It ought not, strictly speaking, to be seen as an alternative claim. The cost of those works was suffered by BPN notwithstanding the supervening decision to demolish. However, even if I accept that as a technically accurate pleading point, then if strictly necessary I would, to do justice between the parties, allow an amendment to include it. I do not, however, consider such an amendment to be necessary. Both structural engineering experts considered the dowel connections to be required; they both agreed it was negligent of Canham to omit them; and the quantity surveyors discussed and agreed the cost of those works as a whole to Block B. These works were in fact only partially performed. The evidence dealt with this, and there is no prejudice to Canham by going on to consider loss suffered by BPN as a result. The alternative would be to consider nominal damages, and to ignore the factual evidence that BPN suffered a real loss by reason of instituting actual remedial works to install the connections, remedial works that, in fact, caused BPN to suffer a loss. The Latin maxim justifying or describing nominal damages is *injuria sine damno*, which means injury without damage. Here, there is damage; it is simply a limited or small amount of damage caused by a small amount of remedial works, which were later overtaken by events. I do not consider that it is a suitable or appropriate situation to award nominal damages.
133. The court is therefore faced, doing the best that it can on the available evidence, with arriving at a just figure for the loss caused to BPN for these works. Doing the best I can on the evidence that is available - and this can be at best a broad brush approach only - I consider the correct measure of loss in this case to be £2,000 for the remedial works that were in fact performed on Block B. This is one half of the cost of what the total remedial works to fit all those connections would be to that block. There is no actual evidence of the cost of only the works that were in fact completed. It must have been more than zero, and less than £4,000. All I am able to do is to choose a figure somewhere between those two extremes. I consider that the law of damages is

sufficiently flexible to allow the court to do that, and by the application of common sense that figure does broad justice between the parties.

134. I then turn to the consequential losses sought by the claimants. There is a problem with these heads of loss. Firstly, there is no distinction between losses incurred by each of the claimants. There is no basis for any recovery by NPS, as I have found. Secondly, the vast majority (if not all) of the losses relate to, or were caused by, the faulty construction of both blocks by Beattie Construction, with the subsequent demolition and rebuilding, which I have found are losses that cannot in law be attributed to the negligence of Canham. Thirdly, the claim for delay and liquidated damages or LADs is not split out into different periods for which there is specific evidence which would allow me to assess how much, if any, was caused by the partial remedial works on Block B. In any event, that was being performed at the same time as other works in respect of Block A, namely its demolition and rebuilding.
135. The wasted costs have not been split between Blocks A and B, and the claimants submit that “there is no easily calculable breakdown”. That is a choice taken by the claimants in how it has presented its case. The claimants suggest a 60:40 split between blocks, but there is no evidence to support that even were I minded to do that (which I am not). The vast bulk, if not all, of these losses were caused by the following matters: the termination of Beattie Construction’s engagement; the defective construction of Blocks A and B; the investigations required; the inevitable decision to demolish Block A; the discovery during that of further serious defects in the superstructure; the loss of confidence in Block B; and the corresponding decision to demolish Block B too. None of them, I consider, have been caused by the negligence or breach of contract of Canham.
136. MLM Consulting Engineers (“MLM”) prepared a report, but that had to address a wide number of matters and not all of them can be attributed to, or seen as effectively caused by, the missing dowel connections. Given the widespread failures by Beattie Construction in terms of defects, and the fact that Foxdown constructed the foundations to the wrong design, and also that Building Control were denied the opportunity to inspect the foundations, I find that the report by MLM would have been required in any event. It was certainly not required as a result of the negligence or breach of contract on the part of Canham.
137. Therefore the only recoverable loss which BPN are entitled to recover by way of damages is the sum of £2,000 which I have already explained. For the avoidance of doubt, and considering the dicta both of Coulson J in *McGlenn* at [114] above, the decision to demolish was not taken by BPN as reasonable mitigation of loss caused by Canham. The need to demolish was caused by causative factors that were not the fault of Canham.
138. In case I am wrong that the recoverable loss by BPN is the £2,000 that I have explained, I will just briefly address nominal damages. The parties lodged various authorities in this respect, including extracts from the relevant textbooks such as *McGregor on Damages*. Nominal damages is a technical phrase which means the court “will have negated anything like real damage”, but affirms that the innocent party has had its rights infringed. This quotation is taken from the speech of Lord Halsbury LC in *The Mediana* [1900] AC 113, 116. In the section in *McGregor* headed “amount awarded”, the cases are tracked from the days when the amount was

miniscule, such as sixpence or a shilling in the very early 20th century, to the amount which eventually crystallised at £2, which as the textbook states was “a figure that lasted for a hundred years”. There was one case in 1944, described by *McGregor* as “curious”, in which the figure awarded for nominal damages was 5 guineas; this is *Constantine v Imperial Hotels* [1944] KB 693. In that case, heard by Birkett J (as he then was) during the Second World War, a traveller brought an action against an innkeeper for wrongfully refusing to receive and lodge him. The plaintiff was a well-known West Indian cricketer and he, his wife and daughter were refused lodgings at the Imperial Hotel, where their accommodation had been booked. They were instead lodged at another of the defendant’s establishments nearby, called the Bedford Hotel.

139. I would not describe that case, or the award of only 5 guineas to that plaintiff, as “curious”. I would describe the award of nominal damages in that case as simply wrong. It would certainly not be followed today, by awarding a plaintiff in those circumstances (whom the judge found suffered “much unjustifiable humiliation and distress” (at 708)) only nominal damages. It stands, in my judgment, more as an example of a claim that should readily lead to recovery of exemplary or aggravated damages, a plea made on Mr Constantine’s behalf before the judge by Patrick Hastings KC, a former Attorney General. But regardless of that, if I am wrong on my central finding that BPN is entitled to damages of £2,000, and therefore is entitled only to nominal damages, any correction to the damages that I have awarded, to replace that sum with a figure for nominal damages, would consider what the correct figure would be to award. Whether nominal damages would still be £2 in 2021 is not something which this judgment needs to consider.

H. Conclusions

140. The claim by NPS fails. NPS correctly abandoned its claim for breach of contract in opening submissions at the trial, and Canham owed NPS no duty of care. Canham did, however, owe duties of care, and had contractual obligations, to BPN.
141. Canham was negligent in the limited respects that I have identified, and this caused BPN loss in the modest sum of £2,000 which I award to BPN as damages. This sum has been calculated in the way that I have explained above. However, the decision to demolish the two blocks was not caused by the negligence of Canham. The Block A foundations were constructed to the wrong revision of the drawings, and the foundations were far more shallow than designed by Canham as a result. There were also widespread and serious defects in Block A that were nothing to do with the foundations at all. The Block B foundations were of the correct depth and dimension, a fortunate coincidence. They were, however, missing the dowel connections between pads and beams too, because Canham had negligently omitted them from both the Revision A and the Revision B drawings. This consequence of Canham’s negligence could, however, be reasonably and adequately remedied by retro-fitting these connections. This was work that was actually instructed, and which was underway, when the decision was taken to abandon that work. That decision was taken because BPN decided to demolish Block B too. That was caused by further discoveries concerning the structure of Block B, partly informed by what was discovered as Block A was demolished. It was also discovered that the superstructure of Block B was moving, another problem or defect that was not caused by the foundations designed by Canham.

142. I consider that this was a weak and speculative claim brought by the claimants. NPS and BPN knew, when it brought this claim, that the foundations as constructed by Foxdown were not the foundations as designed by Canham. This is because that information had been communicated to directors of each of those companies in 2016. Canham put this point firmly in issue in its Defence, and rather than respond to it correctly – even though this was in the knowledge of the claimants – that paragraph of the Defence was said by the claimants in the Reply to be “inadequately particularised”. The claimants therefore attempted to avoid the point. Accordingly, the matter proceeded, and eventually this trial was necessary.
143. The answers to the Issues are as follows. Given my findings on causation, it does not make any difference to the outcome of these proceedings whether I take the wording with the italics (the challenged elements) included, or not. The answer is the same on either iteration. Of the many pleading points raised in the trial, the most substantial is whether the emails of August and September 2014 formed part of the design produced by Canham. I find that they did not; the argument that they did was plainly not pleaded. However, as explained at [104] above, regardless of whether the argument is entertained (even though not pleaded) or not, this makes no difference to the outcome. Those emails were merely provided to Foxdown for pricing purposes.
144. The answers to the issues are therefore as follows:
145. Issue 1: BPN was entitled to rely on the drawings produced by Canham. However, the groundworks sub-contractor (contracted by Beattie Construction) was not provided with the Revision B drawings, and did not rely upon them. Foxdown constructed the Revision A design, those drawings being issued to it “for construction”. It is not known whose fault that was, but it was not the fault of Canham.
146. Issue 2: Foxdown built to the Revision A drawings. It omitted the dowel connections because these were not shown on the drawings. The sleeper wall connections were shown on the architect’s drawings. Foxdown did not install clay heave protection but none was required.
147. Issue 3: Obtaining the measurements from the .dwg drawings is not properly characterised as “scaling off”. Foxdown was entitled to have the relevant dimensions provided as labels on the pdf drawings. In the absence of those dimensions, Foxdown should have asked the designer for that information. The emails from Canham were provided to Foxdown for pricing purposes only and did not form part of the design.
148. Issue 4: The Block B sub-structure was adequate but only if the connections were retro-fitted. The Block A sub-structure was not adequate but had not been built to the Revision B design in any event. The inadequacy of the Block A sub-structure was not caused by Canham.
149. Issue 5: Each sub-structure would have required dowel connections. Therefore, if the Block A sub-structure had been constructed in accordance with the Revision B design, it would have required retro-fitting of connections. However, given it was constructed with inadequate dimensions of pads, the lack of connections made no difference to the inadequacy of its foundations. They were inadequate because they were constructed to the Revision A drawings.
150. Issue 6: Canham owed NPS no duties. Canham owed BPN a duty to exercise reasonable skill and care in the performance of its contractual engagement as the designer of the foundations. Financial loss caused to BPN as a result of any breaches by Canham (if those breaches were an effective cause of BPN’s loss) would in theory

be recoverable from Canham. The cost of demolishing and rebuilding would in principle be recoverable from Canham. However, on these facts the breach by Canham was not an effective cause of that loss or the costs associated with demolition.

151. Issue 7: The only remedial works for which Canham is responsible in law are those works in fact performed to Block B to retro-fit the dowel connections. This work was started, but not completed, because it was overtaken by events, in the sense that a decision was taken to demolish Block B prior to completion of those works. The breaches by Canham were not an effective cause of the decision to demolish, nor were they an effective cause of the decision to demolish Block A. BPN is entitled to recover the sum of £2,000 in respect of the remedial works to Block B that were performed prior to the decision to demolish that block, as the breaches by Canham were an effective cause of that loss.
152. Finally, there is an adjudication scheme for claims in professional negligence, operated by the Professional Negligence Bar Association. It was re-launched in 2017, and if it had been used in this case, would have led to an experienced Queen's Counsel in the field considering the claims and (given it is not a statutory adjudication) issuing a non-binding decision. It is supported by the insurance industry, amongst others. It is a great pity that the parties did not adopt that method of resolving their dispute in this case. It would have been far quicker, and much more economical, than conducting a High Court trial which lasted over three TCC weeks, with all the costs to the parties that such a trial entails. In essence, this case really concerned issues of factual causation. Although they were not all called, there was a total of six different experts instructed in this case, with a claim against Canham for £3.7 million. The negligence was admitted in certain limited respects (or at least was agreed by the experts in the structural engineering joint statement). There were unusual facts, but in the event BPN have succeeded to the tune of only £2,000. Even though there were contested issues of fact, adjudications can in suitable cases proceed with oral evidence and cross-examination of witnesses. Using the scheme to which I have referred, to resolve a dispute such as this one, would have been a far better way for the parties to have proceeded.