The role of the expert witness has long been important in the resolution of construction disputes. The specialist opinion brought by the expert can aid understanding and interpretation of the facts of the dispute, and may be influential in deciding the outcome. The variety of dispute resolution procedures and the requirement for the expert witness to be independent place a heavy burden on the parties to identify and instruct an appropriate expert, and on the expert to ensure they discharge their duty in the correct manner.

The Expert Witness in Construction explains, in practical terms, the way in which experts work with particular reference to the construction industry. Within this book the Expert's role is explained in legal and practical terms as a progression from understanding the basic principles by which Experts can be identified, through appointment, to giving evidence before a tribunal. At every stage commentary is given to:

- help and guide professionals new to the arena of expert evidence;
- act as a resource for those already acting as Experts;
- assist party representatives looking for best practice guidance on the instruction of Experts; and
- provide parties to disputes information on what they should expect from the Expert they appoint to explain the issues in the case.

Covering all the implications of identifying, appointing, instructing and relying on experts, it will help the reader to understand why experts are instructed in the way they are, how to identify the expert that is right for a particular case and how evidence should be presented. Written by a practising lawyer and a consultant with extensive experience of acting as an expert witness, the requirements of both the lawyer and expert are discussed. As such, it will be of interest to both parties to a dispute as well as to the lawyers advising them in a clearer, more productive working relationship.
The Expert Witness in Construction
The Expert Witness in Construction

Robert Horne and John Mullen
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There are many texts available on how the various processes of dispute resolution, from adjudication and mediation to arbitration and litigation, operate. There are fewer texts explaining how those involved in the process should act either as a party, a representative or an expert. This book sets out to explain the role of one, highly specialised, group of people involved in resolving disputes in the construction industry; experts. More specifically, this book will focus on the expert witness and compare that role, where relevant, with other roles that can be undertaken by an expert.

Within this book the expert’s role is explained in legal and practical terms as a progression from understanding the basic principles by which experts can be identified, through appointment, to giving evidence before a tribunal. At every stage commentary is given to:

- help and guide professionals new to the arena of expert evidence;
- act as a resource for those already acting as experts;
- assist party representatives looking for best practice guidance on the instruction of experts; and
- provide information to parties to disputes on what they should expect from the expert they appoint to explain the issues in the case.

The construction industry contains a diverse range of skills and interests. Construction projects will have elements of architecture, engineering, surveying, planning, management and a host of others. The skills required to carry out a construction project, particularly those that are large or complex, form an intricate web of rights and responsibilities with a failure in any area having potential repercussions across the whole project. That technical complexity is matched, to a large extent, by legal complexity in the contractual and other rights the parties have one against the other.

Against this backdrop of complexity in the way business is done, one must add the fact that the essence of construction operations is to produce a bespoke solution to a construction need, whether that need be for a bridge, a school, a hospital or an airport. With complexity and unique approaches come pressures on time and costs to try and make the project risks understandable. It is within that cauldron that, almost inevitably, large construction projects generate disputes, some of which are not capable of resolution at project level and require further input.

To be a successful construction expert is much more than ‘just’ being a good architect, engineer, quantity surveyor or other primary profession. An expert needs to be able to reduce highly complex issues to simple explanations that can be digested and
understood by a tribunal who may have no technical background. The involvement of experts in construction disputes gives rise to a mix of technical skills and forensic attitudes overlaid by legal requirement, expectation and practicality. Achieving a balance between these influences is impossible without exploring what they mean and trying to give them some context. In the context of the expert witness in particular it is true that the more you learn the easier it is to recognise how little you know. The expert is part of a team; in fact the expert will be part of a number of teams (the client team, the legal team, his corporate team, the tribunal team, his primary profession team for example) which may, on the surface, appear to have quite different objectives.

Over the last 15 years in particular, with the advent of adjudication, the Woolf reforms to the court system in England and Wales, the continued rise in technical complexity and scale of projects being undertaken and the global economic downturn, there has been a significant increase in the demand for expert evidence which has, in turn, led to an increase in the commentary by the courts on how expert witnesses have conducted themselves. Although direct comment is less often found in the international context (for reasons which become clear when the different approaches to experts are considered), there has still been an undoubted rise in the need for expert witnesses and the expectation of the role they will fulfil.

In addition to the expectations of those appointing experts, or those to whom their evidence is addressed, there has been a significant rise in what can be described as ‘best practice’ or ‘guidance’ notes. Examples can be found in the re-working of the RICS note for Surveyors acting as Experts and the introduction of a protocol for instructing Experts under the Civil Procedure Rules of England and Wales. The Supreme Court of England and Wales has, in 2011, given detailed guidance on the potential for liability of expert witnesses who give evidence negligently and in numerous other judgments the various levels of court in England and Wales have given guidance on how experts should act; on occasion quite pointedly.

There is no real sign of this pace of development in the arena of the expert slowing down. The Society for Construction Law is, as this book goes to press, mid-consultation on the developing role of the expert. The Court Protocol for the Instruction of Experts is being amended substantially. The ICC is updating its Rules for Expertise relating to a form of Expert Determination. The Jackson Reforms in England and Wales will no doubt also have a significant effect on the use of experts as even more focus is placed on costs and management of the litigation process. The last 15 years may have been full of change for the expert in construction but there is no sign that the next 15 will be any different.

In this book, purely for simplicity of writing, we have used the term ‘he’ and ‘him’ throughout in relation to the expert. This should of course be clearly understood to include ‘she’ and ‘her’ in equal measure. No distinction was intended – only an attempt to keep explanations as simple as possible.
In the text we have quoted from various sources. We would particularly like to acknowledge the following organisations for giving permission to quote from their material:

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1.1 Introduction

Expert evidence, as a subject for legal and even technical comment, is often confined to a few chapters in the middle or towards the end of textbooks covering all aspects of the law of evidence. The purpose of these textbooks is to deal with the law of evidence as a whole and so, in relation to expert witnesses, the key legal issues are identified relating to the production and use of expert evidence but, by their nature, these texts concentrate on the meaning of expert evidence in a legal sense and how it relates to the 'law of evidence'. There is relatively little direct and in depth guidance on the legal issues arising from acting as an expert witness and the use of expert evidence. There is even less guidance putting this into the context of the construction industry and less still that deals with the practical and legal issues together. However, this degree of specific and detailed focus is necessary and invaluable for anyone acting as an expert witness and for those employing or instructing an expert. The law in relation to expert evidence is changing rapidly and so application and analysis of this area, in practice, is particularly important, whether you are an expert witness, instructing experts (frequently or infrequently) or relying on their views to support your position.

This book focuses on the expert's role itself (rather than evidence or procedure) and is divided into two parts. Part One establishes the legal issues and principles surrounding the use of opinion evidence generated by expert witnesses and the role of expert witnesses within, linked to and outside formal proceedings. Part Two focuses on the practicalities of being an expert, in particular giving guidance on the various ways in which expert evidence can be presented to a tribunal and, before that, to the party instructing that expert.

In considering these practicalities this book will explore the different, and sometimes conflicted expectations of clients, lawyers and tribunals and will give guidance as to how

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1 Part One comprises Chapters 1 to 6 and Part Two comprises Chapters 7 to 11. Chapter 12 deals with legal liability common to both Parts.

2 For these purpose a tribunal includes anyone or body to whom an expert provides evidence, guidance or opinions.
expert witnesses, and indeed lawyers, can tread that tightrope to achieve the best use of the knowledge of the retained expert and deploy that knowledge in as persuasive a manner as possible. Of necessity, therefore, the second part of this book will go beyond the simple legal issues surrounding expert evidence and examine the practicalities that all experts should be aware of and how experts should conduct themselves while preparing for and giving evidence. It also provides those instructing experts with guidance as to how they can ensure that their experts provide them and the tribunal with the evidence that is required.

1.2 What is expert evidence?

The opinion of scientific men upon proven facts may be given by men of science within their own science. The above quotation, taken from an eighteenth century case arising out of construction issues, is widely regarded as the first attempt by the courts of England to grapple with the question of opinion evidence – such evidence being not about a fact in question on which a witness had a direct perception but was instead about the interpretation of such a fact or set of facts. Until this point, and even for some considerable period after this case, while the impact and implications of this judgment were being understood, the interpretation of the facts was a matter for the jury (or judge alone in later civil disputes). This meant that complex and highly technical matters could be very difficult to deal with. As a result it is not surprising that construction disputes were difficult to present on a purely factual basis and this helps to explain why the construction industry was at the leading edge of developing a practice of expert witness involvement.

The essence of the issue in Folkes v Chadd was whether the demolition of a sea bank constructed to prevent the sea overflowing into some meadows contributed to the decay of a harbour. The question the court was asked to consider was what had been causing the decay to the harbour. The question itself was a matter for interpretation and would require a deep and detailed understanding of engineering issues to answer it. The defendant, Chadd, produced evidence from an eminent engineer to show that, in his opinion, the demolition of the sea bank had no significant impact on the decay of the harbour. Of course, the eminent engineer was not relaying to the court facts he had observed, but rather his interpretation of what those facts meant and what the consequences of those facts might be.

In his judgment, Lord Mansfield said:

> It is objected that Mr Smeaton [the engineer] is going to speak, not to facts, but as to opinion. That opinion, however, is deduced from facts which are not disputed; the situation of banks, the course of tides and of winds, and the shifting of sands. His opinion, deduced from all of these factors that, mathematically speaking, the bank may contribute to the mischief, but not sensibly. Mr Smeaton understands the construction of harbours, the causes of their destruction and how

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2 [1782] 3DOUG.KB.157.
remedied ... I have myself received the opinion of Mr Smeaton respecting mills, as a matter of science. The cause of the decay of the harbour is a matter of science, and still more so, whether the removal of the bank can be beneficial. Of this, such men as Mr Smeaton alone can judge. Therefore we are of the opinion that his judgement, formed on facts, was proper evidence.

Parts of that explanation from Lord Mansfield are still clearly recognisable in the way expert witnesses are identified today. The most noticeable difference, at least on the surface, was perhaps the focus of the expert evidence being 'a matter of science'. This was the tool the courts used to draw the evidence away from factual evidence without straying into fiction or wild imaginings. How much of the role of the modern expert witness in construction law can be said to be a matter of science? Is delay analysis a matter of science? What about quantity surveying or some aspects of architecture? These are all very relevant and important questions to the development of modern expert evidence dealt with in more detail in this book. However, the role of the expert witness has, in many ways, moved on considerably – not least of which appears to be the acceptance in the recent case of Jones v Kaney\(^5\) that the definition of expert must include an acceptance that there is some form of paid reward for the giving of that expert evidence.\(^6\)

In essence then and at its heart, expert evidence is interpretive opinion evidence provided to the tribunal to assist the decision-making process. The expert witness does not make the decision\(^7\) and neither does he speak on issues outside the remit of factual evidence. For obvious reasons, what it means to be an expert and what it means to give expert evidence are closely linked. Where the dividing lines might be is a constant question and source for continual development, particularly in the construction industry.

1.3 **The expanding role of the expert witness**

The constant refinement of the role of the expert witness, particularly within the construction industry, is the focus of this book. Importantly, the role of the expert witness is now not solely about the production of a report or the provision of an opinion in relation to matters of science, or even the giving of oral evidence before a tribunal.\(^8\) The role of the expert now reaches back into projects still being constructed and forward into the operational phase of an asset and interpretation of the decision or judgment in any dispute. This is particularly true of private finance initiatives and other long-term or complex project models.

The role of the expert as advisor to a party in pre-proceeding stages\(^9\) and as part of a team during any form of dispute resolution is equally important to understand and

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\(^6\) See for example paragraph 100 in the judgment of Lord Dyson.

\(^7\) Other than in expert determination as set out in Chapter 4, section 4.7.

\(^8\) Be that a judge, arbitrator, adjudicator or a myriad of other possible ways of resolving a dispute.

\(^9\) See in particular Chapter 4, section 4.3.
appreciate. A recent case\textsuperscript{10} confirmed that the early involvement of an expert witness is quite acceptable. In the Court of Appeal Lord Justice Tomlinson put it this way:

Experts are often involved in the investigation and preparation of a case from an early stage. There is nothing inherently objectionable, improper or inappropriate about an expert advising his client on the evidence needed to meet the opposing case, indeed it is often likely to be the professional duty of an expert to proffer just such advice. … There is nothing improper in pointing out to a client that his case would be improved if certain assumed features of an incident can be shown not in fact to have occurred, or if conversely features assumed to have been absent can in fact be shown to have been present.

While, on the face of it, the Court of Appeal may be seen to be supporting early expert witness involvement and certainly the Court of Appeal specifically confirmed that expert witnesses do owe duties to their clients as well as to the court, there must always remain some hesitation in expert witnesses becoming too closely involved in the preparation of a claim. The overriding requirement for an expert is that he should be able to present his views impartially. His involvement within the claim preparation team must always have that in mind.

As a matter of practicality, if an expert witness oversteps this line and ventures into the land of becoming an advocate for one party, not only will his credibility within that case be significantly reduced but also his credibility in future cases.\textsuperscript{11} Where the expert witness crosses the line and becomes not an independent and impartial advisor but an advocate, he is often referred to as being a ‘hired gun’. The perception of expert witnesses appearing as hired guns has done great damage to their credibility. Expert witnesses are well advised to always take a cautious approach and not be drawn into a fixed position.\textsuperscript{12}

It is no part of the role of an expert witness to support blindly a position being adopted by the party instructing them. The essence of being an expert witness does indeed go back to the commentary of Lord Mansfield noted above that the expert opinion must be ‘deduced from all these facts’. It is therefore the expert witness’s duty and obligation to involve himself very carefully in all of the facts in order to draw a proper conclusion based on his expertise in that area. There is little value to be had from an expert witness who expects, for example, to be fed all the information he needs and is unwilling or unable to conduct any investigation on his own.

Understanding where the dividing line sits between advocating a position and reaching an independent and impartial view can be complex. It is no doubt the case that the more complex the factual problem and technical issues, the harder it is to see where that dividing line is. An expert witness who believes strongly in his view is not necessarily being an advocate for the party who adopts his position. The question is, who is leading

\textsuperscript{10} Stanley v Rawlinson [2011] EWCA Civ 405.

\textsuperscript{11} Judicial comments in relation to evidence given by experts is often searched for and identified pre-hearing and used in cross-examination. In BSkyB Ltd v HP Enterprise Services UK Limited Mr Justice Ramsey said that ‘Whilst such criticisms are noted the focus must be on the evidence given in this case’. No doubt his intention was to focus on the evidence in the present case but it clearly identifies that judicial criticism will be noted. See also the judgment in Ampleforth Abbey Trust v Turner & Townsend Project Management Limited [2012] EWHC 2137 (TCC). However, whatever the attitude of tribunals in later cases, the more immediate problem for the expert is likely to be obtaining instructions on new matters.

\textsuperscript{12} This is considered more fully in Chapter 11, section 11.8.
that position? Is it the expert witness who has formed an independent view with the client adopting that as his position or the client adopting a position he would like to achieve and persuading an expert witness to support it? For expert and legal teams alike this is an area that needs constant and careful consideration. One false step and the expert's credibility can be destroyed and an otherwise good case irreparably damaged.

While it is often easy to identify the 'safe' areas in providing expert evidence there is no doubt that expert witnesses often come under tremendous pressure to get as close to the advocacy line as possible. Again, however, what may appear as advocacy in the course of cross-examination may simply be the expert witness's genuinely held impartial view which he defends vigorously. The longer the expert has been involved, the more value he has been able to add to the case, but also the firmer his views will be and the easier it will be to slip into advocacy.

Therefore, as well as academic and legal explanation of the duties and obligations of the expert witness, this book will provide practical guidance for experts, and those instructing or relying on them, for staying the right side of the advocacy line and dealing with the pressures which may come to bear.

1.4 What makes a good expert witness?

Nobody sets out with the intention of hiring a bad expert witness. Therefore, the question of what makes a good expert witness is crucial. It is not a simple question to answer. A good expert will have a range of skills and knowledge suited to the needs of the particular issues upon which his expert evidence is needed.

Although it doesn't necessarily help with the definition of what makes a good expert witness, it is important to have fixed clearly in one's mind the purpose of being identified as an expert. Above all else, the expert witness is there to assist the tribunal. Whatever mannerisms, skills and knowledge the expert witness may have, it must be tailored with a view to assisting the particular tribunal he is appearing before. An expert who cannot express his views at an appropriate level for the tribunal to understand is of no assistance to the tribunal and therefore will not make a good expert witness – even if he is the leader in his field and recognised as such within his profession.

As noted above, from 1782 the focus for an expert witness or 'man of science' is that he may give an opinion on a set of facts. So, to continue the reference to *Folkes v Chadd*, the question in that case was whether the demolition of a sea bank contributed to the decay of a nearby harbour. The questions of fact were that the sea wall had been demolished and that the nearby harbour had decayed. The causative link between the two was, however, difficult to establish as a matter of fact and beyond the knowledge of most lay people or indeed, in this case, the tribunal. Lord Mansfield summarised the position as follows:

> The cause of the decay of the harbour is also a matter of science, and still more so, whether the removal of the bank can be beneficial. Of this, such men as Mr Smeaton alone can judge. Therefore, we are of the opinion that his judgment, formed on facts, was proper evidence.

Lord Mansfield obviously found that Mr Smeaton was a 'good expert'. However, when Mr Smeaton was giving evidence there was a very small pool of expert witnesses providing assistance to the court. This is not the case today. In the construction industry alone
there are now many hundreds of experts covering many different disciplines from hydrology to electrical engineering, to quantity surveying.

The essential primary skills that a good expert witness needs to exhibit are detailed below.

1.4.1 Knowledge

A good expert witness must have a thorough knowledge of the area upon which he is to give expert evidence. He must know and appreciate the full range of different views held about his subject matter and must be able to talk knowledgeably about the pros and cons of each different approach.13

1.4.2 Understanding

The expert witness must have the ability to understand the facts of any given scenario and apply his knowledge to those facts. Academic reasoning and discussion is not enough to make a good expert, he must be able to apply that knowledge.14

1.4.3 Expression

In order for an expert witness to assist the court, he must be able to express his views on the facts and the application of those facts to his knowledge in a meaningful and understandable way. The expert must understand that the reason he has been appointed is to assist the tribunal as it does not have his level of knowledge. However, the expert equally must understand that he is not there to teach the tribunal his subject area but to assist in the resolution of a specific difference or dispute or issue to which his opinion has been referred.15

1.4.4 Clarity

The expert witness must be clear in expression and thought. This clarity needs to be represented both in his written work and in his explanation orally before the tribunal.16

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13 See SPE International Limited v Professional Preparation Contractors (UK) Limited and another [10 May 2002] EWHC 881 (Ch) dealt with in detail in Chapter 9 where the claimant’s expert was held to have no relevant expertise of specialist knowledge.

14 See Carillion JM Limited v Phi Group Limited [2011] EWHC 1581 (TCC) in which the expert’s 17 options were said by the judge to have been ‘lacking in reality’. Dealt with in more detail in Chapter 9.

15 Skanska Construction UK Limited v Egger (Barony) Limited [2004] EWHC 1748 (TCC) in which the programming experts report was said to be too complex and extensive for the court to easily assimilate. See Chapter 9 for further discussion.

16 See Double G Communications Limited v News Group International Limited [2011] EWHC 961 (QB) in which the judge found one of the experts could not answer questions in an illuminating or straightforward way, tending to ramble off the point. Further discussion can be found in Chapter 11.
1.4.5 Flexibility

A good expert witness will not have a single answer to every situation. A good expert will take on board additional information and additional facts as presented to him and adjust his views to ensure that his knowledge and understanding remain clear for the tribunal. An expert witness who is too attached to a particular answer and will not change his view, no matter what facts are presented to him, does nobody any service and runs the real risk that he will be seen as crossing the line into advocacy.17

1.4.6 Professionalism

The expert witness must be able to present both himself and his views professionally. He must be able to answer criticism without taking offence and to avoid the temptation of point scoring. This also applies to an expert interacting effectively and appropriately with other experts in any dispute whether they are both appointed by the same party or not.18

1.4.7 Resilience

Once an expert witness has formed a view he should not move away from it lightly. He should have very carefully considered a wide range of issues in order to form that initial view. Rapidly changing approach suggests to a tribunal that the expert does not really fully understand the subject matter.

1.4.8 Team player

This is perhaps one area where some commentators might start to feel uncomfortable. However, it is essential that the expert understands his place in the framework in any dispute and how he should interact with other members of the team operating for one of the disputing parties. The reality is that the expert witness who wants to have a successful career as an expert needs to strike up a rapport with instructing solicitors, advocates, fellow experts and clients alike. An expert witness who is very good but requires a degree of 'management' is likely to receive fewer instructions because of the burden of dealing with such an expert can distract other team members from their role and function.

17 See Double G Communications Limited v News Group International Limited [2011] EWHC 961 (QB) in which the judge said that the other expert was said to have stuck to his theories through thick and thin in cross-examination. Chapter 11 deals with this case in further detail. See also City Inn Limited v Shepherd Construction Limited [2007] CSOH 190 where favourable comment was given to an expert adapting and altering his view in response to further information.

18 See Edwin John Stevens v R J Gullis [1999] BLR 394 (CA), WL 477623 (CA) in which the judge said that one expert was not cooperating with the other experts in the case. Chapter 10 gives further discussion of this case.
Furthermore, the ability to work cooperatively with an opposing expert may be equally important in carrying out joint tests and investigations and working towards narrowing issues and setting them down in an agreed joint statement.

In addition to these primary skills a good expert witness can be defined by a list of secondary skills, such as succinctness, thoroughness and objectivity. However, these skills are built up from varying combinations of the primary skills. For example, succinctness would be a combination of clarity and expression, thoroughness a combination of knowledge, understanding, expression and professionalism, etc.

1.5 What is an expert witness and what is an expert witness used for?

Expert evidence can only be called and presented before any tribunal if it is relevant to one of the issues in dispute, is not capable of determination through presentation of facts alone and is outside the range of experiences on which a lay person can offer opinions. As described in Folkes v Chadd, expert evidence is based on observation and interpretation of certain facts. In order to provide such observations, the expert witness must be able to show a degree of experience or knowledge above and beyond that which is held by the average person.

Therefore, on many issues of opinion or interpretation there will be no need for expert evidence despite the need for forming an opinion. Indeed, if expert evidence was presented in such circumstances, it could quite properly be excluded on the basis that it does not provide any guidance beyond the issues the tribunal is capable of deciding itself.

There is no definitive explanation of what amounts to proper expert opinion evidence. However, in the south Australian case of R v Bonython, Lord Chief Justice King set out two questions which needed to be answered before expert evidence would be allowed. The first question was:

Whether the subject matter of the opinion falls within the class of subjects upon which expert testimony is permissible.

This question was subdivided into two parts as follows:

(a) Whether the subject matter of the opinion is such that a person without instruction or experience in the area of knowledge of human experience would be able to form sound judgement on the matter without the assistance of witnesses in possession of special knowledge or experience in the area; and

(b) Whether the subject matter of the opinion forms part of the body of knowledge or experience which is sufficiently organised or recognised to be accepted as a reliable body of knowledge or experience, a special acquaintance with which, by the witness, would render his opinion of assistance to the Court.

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19 In addition, in court and certain arbitral proceedings, specific leave of the court is required, for example under CPR 35.4(i). See also Chapter 4 for details on arbitral rules where the same requirements exist.

20 Examples include proving a public or general right, proof of charter or proof of a public opinion.

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The second question was framed as follows:

Whether the witness has acquired by study or experience sufficient knowledge of the subject to render his opinion of value in resolving the issue before the Court.

One question which has remained difficult to answer is whether there does in fact need to be a ‘body of knowledge or experience which is sufficiently organised or recognised to be accepted as a reliable body of knowledge or experience.’ In other words, is the method of analysis or area of expertise so scientifically cutting edge that the results it produces are not yet reliable? The most obvious example of such an area outside the field of construction disputes is dactyloscopy, or fingerprint identification. There are few people now who would reject, in principle, the use of fingerprint identification. When it was first introduced, however, it was commonly rejected by the courts as being unreliable.

It is more difficult to identify areas in which comparable issues arise in relation to commercial disputes and particularly construction disputes. In commercial and construction disputes the tribunal or court tends to be much more pragmatic and will listen to an expert witness and then form its own view. However, if one looks at the evidence of, for example, delay experts and analysts it is possible to see a similar trend. In particular, the judgment in *City Inn Limited v Shepherd Construction Limited* identifies the evidence of one delay expert explaining how one or two small changes to the assumptions made by the other expert fundamentally change and remove the credibility of his evidence. In this case, while the court heard the evidence of the challenged expert witness, it did find that his approach was fundamentally undermined and, arguably, did not in fact present expert evidence as described in the tests notified above.

The English courts have been reluctant to provide any form of overarching test or requirement in the use of expert evidence for the reasons set out above. The English courts prefer to rely on general guidance and then adopt a pragmatic view and apply weight to the expert evidence to reach a conclusion. The premise behind this approach is to allow the tribunal the maximum flexibility to decide whether to hear an expert witness on any particular subject and if it does so hear the evidence, what weight it might give to it. As Lord Lane explained in *R v Oakley*:

The answer is that as long as he [the expert] keeps within his reasonable expertise, which is a matter for the Judge, he is entitled to be heard on every aspect as an expert, to that extent, if no further

Therefore, the decision on expertise is reserved for the tribunal – but what is the expertise that is being considered? Is there, for example, any requirement that academic or demonstrable study has been undertaken to give the expert witness the claimed expertise he now intends to share with the tribunal? In other words, in order to give expert evidence does one have to show any forensic qualification or ability? While the question

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22 Although the controversial area of ‘cumulative impact’ claims in relation to loss of productivity on construction sites may be one.


of expertise has arisen on numerous occasions, it is the forensic abilities of the expert witness that are paramount when he acts as an expert witness before a tribunal. In particular, it is the application of facts to expert knowledge which enables an expert to give proper expert evidence. The application of the facts to knowledge is a forensic process starting with the expert witness carrying out a full and proper investigation into the relevant issues. If and when the expert witness does not have that forensic ability, substantial doubt should be cast on his ability to act as a proper expert to the court or tribunal.\(^{25}\)

A case heard in 1894\(^{26}\) gives a good background and starting point to this issue. In this case, the question was whether a person giving evidence in relation to handwriting had sufficient expertise or skill to assist the tribunal. Lord Chief Justice Russell commented, in considering whether the expert witness was ‘peritus’ or sufficiently skilled that:

> It is true that the witness who is called upon to give evidence must be peritus; he must be skilled in doing so; but we cannot say he must become peritus in the way of his business or in any definitive way. The question is, is he peritus? Is he skilled? Has he an adequate knowledge? Looking at the matter of practicality, if a witness is not skilled the Judge will tell the jury to disregard his evidence.

This idea of focusing on what is essentially a practical matter was reinforced in a more recent Canadian case of \textit{R v Bunnies}\(^{27}\). In this case, Canadian Chief Justice Tyrwitt-Drake commented that the manner in which a skill or expertise has been acquired was immaterial, the focal point was whether that skill was possessed by the expert. Canadian Chief Justice Tyrwitt-Drake put it in these terms:

> The test for expertness, so far as the law of evidence is concerned, is skill and skill alone in the field of which is sought to have the witness's opinion. … I adopt, as a working definition of the term ‘skilled person’, one who has by dint of training and practice, acquired a good knowledge of the science or art concerning which his opinion is sought … It is not necessary, for a person to give opinion evidence of a question of human physiology, that he be a doctor of medicine.\(^{28}\)

As a result of these cases, it is clear that from the outset the development of the role of the expert witness has been based on practicality rather than academia. To this extent also, the forensic abilities of the expert witness come to the fore even if they were not a

\(^{25}\) Dr Sean Brady produced a very helpful paper in relation to this issue which he presented to the Society of Construction Law on 8 April 2012 (published March 2012) entitled: \textit{The Structural Engineer as Expert Witness – Forensics and Design}. In this paper, Dr Brady examines the difference between a Structural Engineer capable of providing structural calculations and designs and a Forensic Structural Engineer capable of investigating, understanding and explaining structural failings. Likewise, forensic delay analysis for the purposes of expert evidence is distinct as a skill set from project programming.

\(^{26}\) \textit{R v Silverlock \([1894]\) 2 QB 766.}

\(^{27}\) \( (1964) \) 50 WWR 422.

\(^{28}\) See also \textit{The Trustees of Ampleforth Abbey Trust v Turner & Townsend Project Management Limited \([2012]\) EWHC 2137 (TCC)} where evidence on project management given by someone with no current experience of managing a project was admissible due to work as an expert in related fields.
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basic requirement to be met before evidence can be tendered. Again, one comes back to
the very simply proposition that the expert witness must be giving evidence which is of
assistance to the tribunal in properly deciding the matter before it. To be of assistance
that evidence must provide additional insight into the question in issue.

While experts may therefore be in a rather unique position, they do not have a
completely free hand in the evidence they give. There are a number of fundamental
restrictions or checks and balances against the influence of the opinion evidence of
experts. The first is that the opinion of the expert witness must be based on facts. If the
expert has used the wrong facts, a question often only decided towards the end of any
proceedings, then the expert’s opinion is unlikely to be sound. Lord Justice Lawton
explained the expert’s reliance on the underlying facts in the following terms:

Before a court can assess the value of an opinion it must know the facts upon which it is based.
If the expert has been misinformed about the facts or he has taken irrelevant facts into consid-
eration or has omitted to consider relevant ones the opinion is likely to be valueless.

Lord Justice Lawton’s comments were in relation to a criminal trial but the point on
expert evidence is equally valid for civil matters and specifically construction disputes.
In fact, Lord Justice Lawton went on to explain that the expert must set out the facts
upon which his opinion was based. This explanation by Lord Justice Lawton was long
before the Civil Procedure Rules (CPR) made such a requirement compulsory. Although
Lord Justice Lawton explained the requirement for an explanation of the facts upon
which opinions were based in the context of examination in chief and cross-examina-
tion, the basic point has been adopted generally and is now a requirement of the CPR.

The CPR requires an expert witness to both disclose his instructions and set out the
facts upon which his opinion is based, ending in a declaration that the expert considers
the facts to be true and its opinions reasonable. Although, strictly taken, the guidance
and requirements set out in the CPR are not binding in other circumstances and before
other tribunals, they do at least set out a good practice guide. Indeed, in relation to
domestic disputes, the CPR are invariably adopted and followed in relation to expert
evidence even if little else. In the international context, similar general principles are
adopted but there can be significant and important regional differences.

Of course, if an expert witness was limited to giving opinion evidence based on
agreed facts, the role of the expert witness would be similarly limited and its value to the
tribunal would be questionable. It is the underlying facts themselves that are as often in
dispute as the interpretation or application of them to any particular situation. Further,

29 They provide opinions rather than factual evidence allowing them to interpret and assess in a similar way to
the tribunal.
30 R v Turner (Terence Stuart) (1975) QB 834.
31 Practice Direction to Part 35 Paragraph 3.2(2). See also in relation to arbitration the provisions of the CIArb
Protocol for the Use of Party-Appointed Expert Witnesses in International Arbitration Article 4 and of the
IBA Rules Article 5.2.
32 For example the CPR to not bind the approach in arbitration, adjudication or any other form of ADR, but
see the IBA Rules Article 5.2(b) and CIArb Protocol Article 4(c) and (f) both discussed in Chapter 4.
33 The principles of expert evidence in an international context are given in Chapter 6.
if experts could only rely on agreed or determined facts, every dispute would have to proceed through two stages; the first a factual investigation stage to establish what happened (if necessary), followed by a second interpretive stage to decide what these facts mean and what consequences and conclusions should be drawn from them. This rather restrictive approach to the provision of expert evidence is not helpful to a tribunal.34

While it may provide a good check or balance against an expert witness going too far, it swings the problem too far towards control and away from freedom to allow the expert to provide his evidence in a useful way. Further, and in any event, it is often the role of the expert witness, before giving any evidence to the tribunal, to investigate and interrogate the facts presented to him. A properly instructed expert witness is in a unique position to carry out such investigation and should ensure that he does so. Artificially constraining this important part of the process would distort the role of the expert witness.35

The practical knowledge and experience that a good expert witness brings to any factual investigation can be significant. As an example, an expert in construction, say a quantity surveyor, will have a clear picture of the types of records he would expect to be kept on projects of varying sizes or complexity. When those documents are not presented to him for his factual investigation, he can ask focused and probing questions of those instructing him, or indeed the other side through those instructing him, as to the existence of such documents and if they don't exist, why they were not kept. This challenging and investigation of the facts, where the expert witness brings his expertise to that investigation, is particularly important and can be particularly useful to the tribunal. The investigatory role of the expert is not only to be recommended but is a key part of the modern experts’ roles.36

The days when an expert witness, particularly in the construction industry, could give an opinion simply on the facts given to him and without his own thorough investigation are long passed. If nothing else, the CPR37 requires confirmation from the expert witness of what he has considered and what he has been provided with. A lack of independent investigation by the expert witness will be readily apparent and will seriously damage the credibility of the evidence which the expert presents and indeed the credibility of the expert himself through what would undoubtedly be a very uncomfortable period of cross-examination which could be along the following lines:

COUNSEL: Mr Smith, you appear here as a quantity surveying expert for the Claimant
MR SMITH: Correct
COUNSEL: You have provided a report setting out those documents upon which you rely
MR SMITH: Correct
COUNSEL: Is that list of documentation complete?

34 Although there are times when a separate hearing and determination of facts may considerably reduce the extent and hence costs of the expert evidence that is required.
35 Current guidance in the CJC Guidance is such that parties and their experts are encouraged to agree a joint set of relevant documents at an early stage. This is a significant step towards agreeing facts without binding the experts too tightly to a single methodology.
36 See the comments of Mr Justice Ramsey in BSkyB Ltd v HP Enterprise Services UK Limited [2010] EWHC 86 (TCC).
37 Practice Direction 35 Paragraph 3.2(3).
MR SMITH: It is complete
COUNSEL: The list of documents attached to your report does not identify any invoices. Does that mean that you have not considered invoices in reaching your expert opinion on the quantum issues upon which you give expert evidence?
MR SMITH: That is correct. I have not considered invoices
COUNSEL: Why, Mr Smith, have you not considered invoices? Do you not consider them relevant?
MR SMITH: I’ve not considered invoices as I was not asked to consider invoices. I do consider invoices would be relevant to providing an expert opinion
COUNSEL: Mr Smith, do you appreciate the nature of your duty to the court?
MR SMITH: Yes, my overriding duty is to the court to provide it with guidance and assistance on matter within my expertise
COUNSEL: Mr Smith, did you ask to see the invoices?
MR SMITH: No I did not
COUNSEL: You agree with me that the invoices are relevant to the proper formulation of your expert opinion but you did not look at them. Is that correct?
MR SMITH: Yes, that is correct
COUNSEL: If you accept that it was necessary to review the invoices to provide a proper opinion, that you did not look at the invoices and that you did not try to look at the invoices, please could you explain to the court how you consider you have complied with your duty to provide proper expert evidence
MR SMITH: …

In the modern age of text searchable judgments, negative judicial comment about the credibility and reliability of expert witnesses is easy to obtain and should not be ignored. Although it will not be a deciding factor in subsequent cases as to the weight to be given to expert evidence it is an issue which subsequent judges will take note of.38

The Civil Evidence Act 1972 confirms the position from the early case law that expert opinion evidence is admissible generally. The Civil Evidence Act provides, at Section 3, as follows:

1. Subject to any rules of court … where a person is called as a witness in any Civil Proceedings, his opinion on any relevant matter on which he is qualified to give expert evidence, shall be admissible in evidence…
2. In this section ‘relevant matter’ includes an issue in the proceedings in question.

Therefore, the Civil Evidence Act 1972, together with the CPR sets out the basic requirements for admissibility of expert evidence. Added to that should be the common law guidance on expert witnesses provided in the Ikarian Reefer.39 The Ikarian Reefer should be very much seen as a precursor and forerunner to the detailed requirements of the CPR in relation to the provision of expert evidence to a tribunal or court.40

38 See Mr Justice Ramsey in BSkyB Ltd v HP Enterprise Services UK Limited [2010] EWHC 86 (TCC) but also see paragraph 88 of the judgment of Judge Keyser QC in The Trustees of Ampleforth Abbey Trust v Turner & Townsend Project Management Limited [2012] EWHC 2137 (TCC).
40 See Chapter 2 for detailed discussion on the Ikarian Reefer and duties of the expert.
It is not just within the UK or Commonwealth jurisdiction countries that the role of expert evidence has been significantly explored and explained. The American Federal Rule of Evidence 702 provides a similar explanation and definition of the provision of expert evidence. They possibly give a more specific and useful set of guidelines for an expert to understand his obligations and duties. The American Federal Rule of Evidence 702 provides as follows:

If scientific, technical or other specialised knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training or education may testify thereto in the form of an opinion or otherwise.

The American Federal Rule of Evidence carries on and provides further guidance at 704 in the following terms:

(a) Except as provided in Sub Division (B), testimony in the form of an opinion or inference otherwise admissible is not objectionable because it embraces an ultimate issue to be decided by the trier of fact.

(b) No expert witness testifying with respect to the mental state or condition of an accused in a criminal case may state an opinion or inference as to whether the accused did or did not have the mental state or condition constituting the element of the crime charged or of a defence thereto. Such ultimate issues are matters for the trier of fact alone.

The opportunity to provide expert evidence is therefore very widely drawn. There are a small number of specific, statutory, restrictions on the provision of expert evidence, but none of these specific restrictions apply to expert witnesses in the usual run of construction disputes. The tribunal is therefore left with a very open hand to take that evidence which it considers will be of benefit to it.

1.6 Duties of the expert witness

In recent years focus for the role, obligation and duties of an expert witness has been on the relationship between the expert and the tribunal. That is the case whatever the format of the tribunal but particularly in relation to arbitration and litigation (as explained in Part 35 of the CPR) (and the Ikarian Reefer).

Within the judgment on the Ikarian Reefer, the court took the opportunity to make clear that the primary obligation of any expert witness was to the tribunal. The principle findings within the Ikarian Reefer judgment were:

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41 See Section 1 of the Criminal Procedure (Insanity and Fitness to Plead) Act 1991 setting out specific requirements for the qualification of medical practitioners to give certain evidence in relation to pleas of insanity and fitness to plead in criminal cases.
42 Particularly since the Ikarian Reefer.