

Sustainability – the role of Construction Contracts

This paper is based on and expands upon the work done by JCT in its sustainability consultation and the publication of its guidance note 'Building a sustainable future together'.¹ It specifically looks at how construction contracts can be used within the procurement process to achieve sustainable outcomes and to look at their effectiveness and limitations.

Before looking at construction contracts it is important to place them within the wider context of sustainability, not least because one might justifiably ask not only what have contracts to offer but how important are they in the scale of matters related to sustainability. Sir Crispin Tickell, in his foreword to James Lovelock's book 'the revenge of gaia' reiterates that the first requirement is to recognise the existence of a problem regarding sustainability, the second is to understand the problem and draw the right conclusions and the third is to do something about it. Sustainability is now recognised as a problem, although this recognition is still not universal. Furthermore, even if there were such recognition there is still the issue of what is understood to be the problem: defining the problem is an essential requirement of its understanding. It is unclear to what extent this has been achieved and the nature of any agreement on this matter, or indeed whether it can be achieved at all. Therefore it is a moot point as to whether the problem is fully understood. Without understanding the problem it is not possible to draw reliably the right conclusions: they could of course be reached by chance although this should not be relied upon.

There are many different views on sustainability which, can and generally do, include the subject of climate change. This linkage is problematic because the cause of climate change is not universally acknowledged. It is argued that the cause and effect is not established and there is still room for debate.² There is a relationship between climate change and sustainability but there is also a distinction. One that construction practitioners should recognise as it is an important in the context of construction contracts.

The position on sustainability is quite different in that there is little room, if any, for debate on the need to ensure sustainability (in this narrower sense) because it is self-evident that in the context of our own planet most resources are limited and will suffer depletion through use. Nor is there room for debate on the need for the safe disposal of waste or on the emission of pollutants because of their consequences for health as contrasted to any effect they may have on climate.

¹ JCT Building a sustainable future together 2011 – guidance note published by Sweet & Maxwell 2011

² Comment, Professor Michael Kelly, Prince Philip Professor of Technology at Cambridge and Fellow of the Royal Society, Daily Mail March 15 2015,

Governments should address matters of great concern and where the matter is not simply domestic in nature it is absolutely essential that they work with other governments in an attempt to provide a framework to address any such concerns. The Kyoto Protocol and the Climate Change Act 2008 are examples of government action and what could be described as the highest level of intervention into what we do and possibly how it is achieved. Such intervention is intended to be wide ranging and to create a behavioural shift. It is an important tool but one that has significant shortcomings, namely, it may produce ill-defined or inappropriate objectives; the provision of requirements that either widely understate or overstate what is to be achieved.

In a somewhat different context it is suggested³ that organisations such as the EU have an inclination to believe that behaviour is driven by rules whereas by contrast, economists know that it is driven by incentives. The UK Government recognises this point and has sought to improve the sustainability culture of business, through persuasion, through tax and fiscal incentives, in addition to straightforward statutory regulation such as the planning system or regulations such as the Code for Sustainable Homes or building regulations. This is relevant as to how one addresses construction contracts.

However, there is a risk that some of these approaches are inadequate in that, at best, they deal with minimum requirements and therefore only provide a partial solution. Much more is required and all promoters of buildings and other construction works need to be persuaded that sustainability is not only worthwhile but necessary: it must be embedded in their thinking. Furthermore, there must be much higher regard to regulations covering how a project is built not just regulations that determine what can be built. Construction contracts can be concerned to varying degrees with both aspects.

Much of the current process of providing buildings is inherently inefficient and there is a substantial reform process in place that is designed to increase efficiencies in the procurement of construction. This is driven primarily by the desire to produce any given output for a lower price or, to look at it another way, to produce a greater volume for a proportionately lower price, not to address sustainability but it may have a consequential effect. Producing the same output from lower inputs would generally be seen as beneficial in terms of sustainability but that depends upon the nature of those inputs. Consequently, it would be safer to say it *may* be beneficial because alternative material use and alternative processes which lower costs can, and often do, worsen the situation. In other words economic efficiency in terms of cost may not necessary be a friend of sustainability. Therefore the funder may be presented with a major problem: can a sustainable solution be justified in commercial terms.

Success in optimising performance and output is achieved by bringing together social, economic and environmental sustainability into the right balance. Finding the right balance will arise by seeking to understand the problem that exists and by coming to a proper conclusion. Regardless of the facts, the right balance will vary according to one's perspective and therefore the concept that there is just one right answer appears flawed.

³ Viewpoint, Roger Bootle (Chairman of Capital Economics), Daily Telegraph 28th June 2015

The idea that sustainability can be tackled through construction contracts (which form part of the legal framework in which the building is constructed) might appear ridiculous. This is particularly so when one looks at the spectrum of activity that includes international frameworks, international treaties, domestic legislation (both primary and secondary), economic instruments including tax incentives and education. Such measures are clearly of much greater scale and therefore, not surprisingly, will be seen as far more important. However, if tackling sustainability through construction contracts does appear a little weak it would miss the point, which is that a bottom up approach is as valid as a top down approach. Indeed it is unlikely, if not impossible, to achieve the wider goal without engaging individuals at the lower levels of activity. The Strategy for Sustainable Construction (2008)⁴ and latter publications⁵ recognised this point and that everyone involved in construction has a role to play. How one constructs buildings and how this is controlled by construction contracts is one such approach to sustainability (as compared with climate change – although it may well impact on that in some small way).

Construction works take place to fulfil the requirements and aspirations of humans. It is a natural consequence of human development but as populations grow and the need to fulfil those aspirations expands the impact it has becomes more significant. Significant not only in terms of the visual impact it has on the natural environment but on the environment more generally. The issue of sustainability arises at many different levels and this poses some awkward questions; the answers to which may prove more than merely uncomfortable. It raises huge philosophical questions such as why are we here and to what end, if any, do we progress. What right do we have to do what we do? Should we create different lifestyles? Philosophical questions such as these are seldom addressed when we consider sustainable construction but this is understandable. In whatever we do there is a wider picture, one which we may or may not see, or one perhaps that we chose not to see. In looking at construction contracts one concentrates on a very small part of what we do but that does not mean we are necessarily unaware of the wider picture – although it might. The important thing is that construction practitioners play their part in addressing sustainability because it is fundamental to the way we, and subsequent generations, will live.

It is clear that sustainability is particularly relevant to construction, not least for the reason that the built environment is responsible for nearly half of the UK's carbon emissions, half of its water consumption, a third of landfill waste and a quarter of all raw material used in the economy. Not that surprising because construction is a substantial part of the UK economy consuming vast amounts of resources, both materials and manpower and contributes around 7% of Gross Domestic Product (GDP).⁶

⁴ Strategy for sustainable Construction, Cabinet Office June 2008, Chapter 6 – People

⁵ Construction Strategy 2015, Industrial Strategy: government and industry in partnership, HMG

⁶ <http://www.tradingeconomics.com/united-kingdom/gdp-growth>

In looking at any particular aspect of work, however small that work may be, and its effect on sustainability, we are both consciously and unconsciously influencing how we and others think and act. Construction contracts are no different in that respect. In considering construction contracts it is not simply a matter of looking at what the contract states in order to determine what obligations are imposed but more importantly it is about the means by which construction works are procured and how they are reflected in project documents.

Sustainability in construction has a number of different aspects, namely, those concerned with design, construction and operation. Who it is that considers each of those and when they do so will depend upon the procurement process rather than the contract itself. Put another way, the contract simply reflects the decisions which should have been made already. That situation will only arise when participants in the construction process understand what sustainability means in terms of design, construction and operation and act accordingly. Consideration of matters related to sustainability need to be intrinsic and an inherent component of one's thinking – not a separate consideration. Until then, contracts and especially the accompanying guidance on contracts have a very important role – that of making aware and educating.

The JCT consultation

The JCT recognised the importance of sustainability and that this could be tackled in various ways: that was something which the Joint Contracts Tribunal (JCT) wanted to explore and why it decided to set up its own consultation on sustainability and its relationship with construction contracts.⁷

JCT wanted to see if the incorporation of provisions in guidance notes or contract documentation (including the contract conditions) offered the possibility of a more complete solution, whereby the supply chain could be incentivised to improve sustainability by setting down benchmarks that meet the overall sustainability requirements of a particular stakeholder(s) or specific project(s). A further part of the rationale behind that consultation was to bring together in the minds of industry participants the concepts of sustainability and whole life cycle planning and in doing so to try to uncover how they can better tackle and consequently improve the construction industry's overall performance particularly through contracts, contract documentation and procurement. The underlying question was 'How should sustainability be addressed as part of a JCT Contract?'

The output of the initial consultations was the guidance note on sustainability⁸ which was produced with a view to helping practitioners. Although the findings of the JCT consultation

⁷ The consultation with industry started in 2008 and was conducted in various phases – the output of the last consultation was published as the Report on the JCT Sustainability: Lifecycle Consultation by Sweet & Maxwell 2013. See also www.jctltd.co.uk/sustainability.aspx

⁸ JCT Building a sustainable future together 2011 – guidance note published by Sweet & Maxwell 2011

and the follow up work by JCT and its working party have been drawn upon to support the views put forward in this paper the views expressed are those of the author unless otherwise stated.

JCT's consultation found that there were diverse views on what constituted sustainability and consequently how to deal with it. Nevertheless, it was clear from the findings that sustainability was a matter of importance for the industry. A substantial majority (84%) of those responding thought that performance could be improved through industry specific contract documentation but respondents had quite different views as to what type of documents should be used to regulate such matters. There was a belief amongst all respondents that sustainability went far beyond construction contracts and consequently the conclusions reached as to the role contracts could play were markedly different. The wide range of views was partly down to the interpretation of the definition of sustainability.⁹ It is also probable that the varied views were also influenced by what constitutes a contract. There is a clear and important distinction that can be made between the contract agreement together with the conditions of contract (which comprises a standard form or bespoke contract form) and the other requirements e.g. specification, schedules etc. which form part of the documents and are incorporated as contract documents. In the following part of this paper the term contract conditions apply only to that part of the contract whereas the term contract will embrace the other incorporated documents as well as the conditions.

Although contract conditions can play an important part they are not necessarily an essential part in setting out and regulating matters related to sustainability. The question for practitioners and clients is not whether they should provide for sustainability but how they should provide for it in the contract? Documents, other than the contract conditions themselves, are thought by many to be the right place to provide for sustainability: such other documents would, in the normal course of events, form part of the tender/ bid documents. The minority view is that the contract conditions themselves should be used rather than the other documents. Despite the different views it is evident that a vast majority either already include provisions in their contracts or believe there should be express standard provisions in the contract to govern matters of sustainability.

A small percentage thought that contract conditions either had no role to play or one that is only marginal in dealing with sustainability. For others the whole process of dealing with sustainability was an inherent part of their work as a designer and an integral part of the project; for them the contract need make no specific reference to sustainability. This is an understandable view but this is still an objective to be fulfilled rather than the situation that applies generally. Awareness of sustainability is a necessary pre-requisite for determining how it is to be dealt with. The question for now is whether one should consciously tackle sustainability as a separate exercise and if so, in what part of the contract. For now it seems we have to think of sustainability as a separate exercise and will do so until such time as it becomes properly embedded in our creative actions. As to which part of the contract that is

⁹ The definition adopted and set out in Building a sustainable future together is that of the Brundtland Commission i.e. Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

an open question but at present there is a continuing trend towards including sustainability provisions in contract documents, with much of this done by reference to other documents.

Specification or Contract Conditions

Although nearly all practitioners and building promoters support the proposition that sustainability should be provided for in a construction contract there is no consensus as to how this should be done. In terms of law it may be said that an express contract provision is superior to the specification. That may be true if the contract condition is a fundamental term (as contrasted with a warranty) because this provides for a stronger remedy in the event of a breach – the ability to terminate the contract where there is such a breach. In other situations the remedy would be damages and these can flow equally from a breach of the contract conditions or a breach of anything contained in a specification or other contract documents that comprise the contract.

An obligation may be either expressed or implied in a specification or other similar document. However, relying on an implied term nearly always raises questions as to applicability and it is far better to use express provisions in whatever documents one chooses for the contract. Terms related to sustainability are not at present generally implied although over time this may change. What is particularly important in terms of the obligation is that the specification or other document is a contract document or referred to as such and incorporated accordingly. Some provisions related to sustainability may be only incorporated by reference but this is not necessarily a good way of dealing with them as it does not promote awareness and understanding.

In purely legal terms, unless one wants to specifically provide for a stronger remedy, sustainability can be provided for either in the contract conditions or in the specification or indeed both. Notwithstanding this fact, many practitioners believe that the contract conditions provide the best means of regulating sustainability, regardless as to whether or not the condition is a fundamental term. This view is no doubt held, in part, in the belief that by doing so it raises the profile of sustainability and therefore helps to educate practitioners and others and to embed the concept in the thought processes.

Sustainability provisions can take the form of either a general contract obligation to comply or in the form of precise technical requirements. This means that both the contract conditions and the specification or other documents may fulfil a purpose; it is a matter of approach. Where such a contract condition is used it is preferable to word it as an obligation to comply with the specific detailed requirements set out in supporting contract documents rather than set out such detail in the contract conditions. The main reason for the inclusion of sustainability provisions in the contract conditions is the prominence it gives; however it is not necessarily the best place to cover detailed technical requirements. The principal reason why JCT chose to incorporate such provisions in its standard form contracts was to raise the prominence of sustainability and hopefully to improve sustainability education.

Perhaps not surprisingly the general view is that contract clauses concerning sustainability must be legally enforceable; after all surely that is what a contract clause is supposed to be: otherwise there is no point because it might be ignored. WRAP makes the point “Whilst considering resource efficiency and incorporating it into the procurement process is beneficial, in the absence of a contractual obligation on the suppliers, it is difficult for the Employer to enforce compliance with its required process”¹⁰. However with the development of the partnering concept there has been a move towards the inclusion in the contract of non-binding and aspirational provisions. For those who subscribe to the partnering concept, the argument that such provisions are not legally enforceable is countered by the belief that in the event of failure, other sanctions, if considered appropriate, might apply instead of traditional legal remedies. The most often stated sanction being a loss in continuity of work – this also works conversely as an incentive. The use of aspirational clauses is embraced by some – they are seen as a means to facilitate a shift in what we do rather than an attempt to prescribe what is to be done or achieved. For others there is no place for them in a legally binding document.

Despite the reasons expressed for inclusion of terms in the contract conditions, the precise terms, if any, that go into the contract conditions as compared with the other documentation that makes up the contract is, as already said, a matter of choice. The actual terms required are dependent principally upon the particular contract that is being considered. For instance, is it between the:

Client and designer;

Client and contractor, where the design is already substantially complete and where the contractor has no design responsibility;

Client and contractor, where the design is already partially complete and where the contractor has some design responsibility;

Client and design and build contractor;

Client and design build and operate contractor.

The decision on the procurement of the project will establish the types of relationship that will arise. Procurement, of course, can be approached in many ways and each approach has a number of levels of operation. Some major differences exist within the range of procurement options but there is also much commonality. However, the choice is not generally determined by any consideration with regard to sustainability but such choice can have a significant affect.

¹⁰Procuring resource efficient construction: legal aspects at <http://www.wrap.org.uk/content/procuring-resource-efficient-construction-legal-aspects>

It is probably fair to say that on most projects the design process and the planning of the construction process are given separate consideration and are carried out as separate operations. This has a consequence not only on the outcome of the project, including aspects of sustainability, but also on how sustainability is provided for in the contract. It is suggested that an integrated approach is desirable and helps overcome this problem; also, it is suggested that some procurement approaches lend themselves more to integration than others. However, the success or otherwise of integration is more dependent upon effective management and leadership than the procurement process itself. Through effective integration all aspects of the design and the associated construction processes involved with that design are more readily considered together rather than separately.

Where the design and construction processes are considered separately in terms of sustainability this will result in:

The design becoming fixed - the freedom to adopt sustainable construction processes still exists but is limited by the constraints of the design.

Consideration of the construction processes indicating that sustainability may be better addressed by modifying the design or indeed creating an entirely different design.

Consequently it is unlikely that such an approach will be entirely effective in producing a good sustainable outcome. Where it does produce a good sustainable outcome it is quite likely that reworking of the design will have taken place. That would be an inefficient process and any such process by its very nature is poor in other aspects of sustainability, albeit primarily economic rather than environmental. Although it is evident that the approach to procurement can impact on the solution in various ways, including the effectiveness of providing a proper sustainable solution, it is the knowledge and technical and behavioural skills of the respective players that determine the nature of that solution.

JCT Standard Form Contracts and Sustainability

The principal JCT contracts¹¹ for securing sustainability benefits are:

JCT Framework Agreement 2011

JCT – Constructing Excellence Contract 2011 and its associated Project Team Agreement

JCT Pre-Construction Services Agreement (General Contractor) 2011

JCT Pre-Construction Services Agreement (Specialists) 2011

¹¹ Published by Sweet & Maxwell on behalf of The Joint Contracts Tribunal Limited (JCT)

JCT Consultancy Agreement (Public Sector) 2011

However, all the 2011 editions of JCT contracts (with a few exceptions) contain sustainability provisions in a Schedule to the conditions. To ensure the whole supply chain embraces sustainability and is responsible for delivering a solution it is necessary that sub-contracts and other contracts further down that chain have stepped down into them such sustainability provisions. Everyone in the supply chain is responsible for delivering a solution and needs to embrace all aspects of the concept.

The sustainability provisions contained within the JCT Framework Agreement are:

The Framework Objectives

- 5.1 The Framework Objectives are as follows:
- 5.1.1 zero health and safety incidents;
 - 5.1.2 teamworking and consideration for others;
 - 5.1.3 greater predictability of out-turn cost and programme;
 - 5.1.4 improvements in quality, productivity and value for money;
 - 5.1.5 improvements in environmental performance and sustainability and reductions in environmental impact;
 - 5.1.6 right first time with zero defects;
 - 5.1.7 the avoidance of disputes;
 - 5.1.8 Employer satisfaction with product and service; and
 - 5.1.9 enhancement of the Provider's reputation and commercial opportunities.
- 5.2 The Provider's contribution to progress in achieving certain of the Framework Objectives will be monitored and periodically assessed in the manner indicated in clause 21.

The Provider's Supply Chain

- 10.1 The Provider will endeavour to see to it that all members of his Supply Chain are made aware of, understand and are prepared to embrace and adhere to the principles of collaborative working envisaged in this Framework Agreement. Where practicable and appropriate the Provider will engage members of his Supply Chain on terms which incorporate or reflect such principles.
- 10.2 The Provider will, where practicable and appropriate, endeavour to consult with and/or involve members of the Provider's Supply Chain in relation to the following essential aspects of the Tasks:
- 10.2.1 design development;
 - 10.2.2 project planning;
 - 10.2.3 risk assessment and risk allocation;
 - 10.2.4 health and safety assessments and planning;
 - 10.2.5 assessing and improving upon environmental performance and sustainability and reducing

- environmental impact;
- 10.2.6 value engineering;
- 10.2.7 change control;
- 10.2.8 quality control;
- 10.2.9 early warning; and
- 10.2.10 problem solving.

Sustainable development and environmental considerations

- 16 The Provider will assist the Employer and the other Project Participants in exploring ways in which the environmental performance and sustainability of the Tasks might be improved and environmental impact reduced. For instance, the selection of products and materials and/or the adoption of construction/engineering techniques and processes which result in or involve:
- 16.1 reductions in waste;
 - 16.2 reductions in energy consumption;
 - 16.3 reductions in mains water consumption;
 - 16.4 reductions in CO2 emissions;
 - 16.5 reductions in materials from non-renewable sources;
 - 16.6 reductions in commercial vehicle movements;
 - 16.7 maintenance or optimisation of biodiversity;
 - 16.8 maintenance or optimisation of ecologically valuable habitat; and
 - 16.9 improvements in whole life performance.

It can be seen that these provisions cover a wide range of matters, not all would be instantly recognisable as pertaining to sustainability but they are. They either deal with sustainability directly as in clauses 5.1.5, 10.2.5 and more generally as in clause 16 but also in the other clauses both directly and indirectly through avoiding wasted effort and through collaborative team working to find improved solutions.

Aspirational or Legally Binding Provisions

Reference has been made above to the use of aspirational clauses and any analysis of the above framework provisions would identify their use. The validity or otherwise of the arguments for using such clauses is a matter for practitioners to decide. However their use in situations where targets are specified, as compared with an obligatory outcome, is understandable. Use of provisions in these circumstances is appropriate. However, it is likely that the use of aspirational clauses will decline over time as experience is gained as to the appropriateness of targets and their measurement because that can lead to specific performance requirements being stated. Clause 21, referred to in clause 5, is the key point in that certain objectives will be monitored and assessed. It will be seen that it is not expected that monitoring and assessment will apply to all objectives but only to those where performance indicators are stated. Generally, performance indicators are an integral part of a process of continuous improvement but not for use when setting obligatory requirements. Only when there is certainty that an event is possible can any measurable target transmogrify into a requirement that could be legally enforceable.

A fairly typical aspirational clause may include words such as:

“The supplier will assist the employer in exploring ways in which the environmental performance of the works to be constructed might be improved.” Despite specific reference to tangible items and words like ‘will assist ... in exploring ways’ the provision is still aspirational in nature. Although an unwillingness to assist would be a breach, the words are primarily aspirational in nature because the remedy for default is unquantifiable and therefore of little import. Even if such a provision was extended to include reference to reducing the environmental impact, as in clause 5.1.5 above, it would remain primarily aspirational.

It is aspirational in that it seeks to improve environmental performance, reduce environmental impact and hence improve sustainability. Its legal enforceability is doubtful, certainly in any meaningful way, because there are no specific requirements: indeed it would be highly questionable that such requirements could be established properly, let alone agreed.

Not only are there no specific requirements, there are no targets: without targets that can be measured readily the provision’s effectiveness is limited severely. The use of expert evidence to adduce what would be appropriate targets post facto is not a feasible option. The introduction of measurable targets/performance indicators, as might be used in conjunction with those items to which clause 16 applies, are essential for providing a meaningful framework for the purposes of continuous improvement but still possess limitations because of a vagueness as to what, if any, sanctions might apply. Clearly, long term procurement under framework agreements and the like have the greatest potential for continuous improvement.

Moving from a target to an obligatory requirement is difficult as few are likely to sign up to any that may be set where there is a lack of benchmarks¹². We can seek to reduce waste by ‘x’ or energy by ‘y’ but as there is no way of ascertaining how realistic each is, or in some instances even controlling what occurs, such provisions will not serve as ones where a legal sanction can be applied properly. However, that is not necessarily the case with regard to other types of sanction. It is one thing preferring a contractor who has previously shown he can achieve or has made good progress towards such targets but quite another securing a legal remedy where there is failure to achieve them. Upon analysis it will be seen that each provision in clause 16 has the potential for establishing targets against which performance can be measured but as to providing an obligatory requirement that is another matter.

Perhaps the lack of certainty as to legal enforceability is why, in the JCT consultation, little support was found for aspirational provisions. Despite those findings aspirational provisions are increasingly prevalent perhaps for the reason that there is a high measure of unwillingness to sign up to clauses which are legally enforceable when the basis for

¹² The issue of benchmarks will over time be resolved to a large extent by schemes such as the BCIS Benchmark Report run by the RICS; however the bespoke nature of much construction creates a constraint upon its application.

establishing a required outcome is unclear – and because there is growing recognition that they do indeed have a very specific role.

One should always be clear as to whether an aspirational or legally enforceable clause is in fact what is expected. In determining whether a provision in a contract is aspirational, one should ask whether or not the provision sets a specific obligation or target and what sanction, if any, there is where there is any failure to fulfil the obligation or achieve such a target. Where an obligation is set it should be clear because one that is ill-defined will not necessarily become aspirational in nature but one that becomes legally enforceable: following legal proceedings and expert evidence it might establish something somewhat different to that which was anticipated. However, an obligation that cannot be measured objectively will in effect become aspirational in nature as there can be no meaningful contractual sanction.

Despite the reservations expressed by many as to the use of and means to draft clear legally enforceable clauses regarding sustainability there is a contrary view. Legally enforceable clauses are of use and can be drafted where some objective measurement is available and it has been suggested that, for example, BREEAM ratings, LEED certification, the Merton Rule, Site Waste Management Plans and Energy Performance Certificates and similar can be used. There are three points here, first:

Specific reference to those measures may feature in the contract, possibly with relevant details in specifically provided contract particulars or alternatively solely in the other contract documents – as detailed requirements may vary significantly trying to enshrine them in standard conditions alone is not a practical proposition.

Secondly, objectivity in terms of measurement may not be complete – for example, against what is a site waste management plan to be judged. Also a plan is one thing, meaningful deliverables another.

Thirdly, the underlying structure of the scheme etc. may be such that it is not entirely rationale, it may become fixed in time or at worst it is ill-founded i.e. not tackling the cause.

Another problem concerns the fragmented nature of guidance and rating schemes because that makes it difficult for practitioners to know how best to proceed. This is not a criticism because a multifarious approach is quite natural in one's attempt to define a problem and to find a solution but widely differing approaches do nevertheless form a hurdle for many. Notwithstanding, it is suggested that the use of such schemes is desirable as a means of changing practice and behaviour so as to make what we do more sustainable. Users should decide what is the most appropriate for the project and specify very clearly what is expected. However, before using any such scheme practitioners should make themselves entirely familiar with all details of the scheme's operation before deciding whether it should form either a contractual requirement or an aspirational provision.

The initiative for the use of certifiable schemes and the like may arise in a number of ways e.g. through the force of law (both directly and indirectly), by practitioners wanting to be seen as at the forefront of developments or by clients who see both a commercial risk (not doing what others are doing) and an opportunity (providing a competitive edge) in sustainability.

It appears that to date the force of law has been the biggest driver and regulation such as the EU Energy Efficiency Directive has been a major motivator. However, the point is made that 'landlords should be prioritising green building improvements to avoid diminishing their properties' future investment appeal',¹³ which rightly suggests that consideration of sustainability has a place regardless of legislation. This is absolutely correct because it does. Here we see a commercial issue and we know from experience that commercialism is often the most effective driver of all. The point regarding landlords reinforces a finding of the JCT consultation which stated "Sustainability objectives are best achieved when the client organisation is committed and takes the lead"¹⁴ It is unlikely that much progress will be made on the form of contract provisions for sustainable outcomes unless clients accept the need. However, it is for professional advisors to point out to clients the potential for sustainable solutions and the part that contracts can play.

It can be seen that standard contract provisions and contract guidance has a role in shaping behaviour and changing practices so as to promote and improve sustainability. External pressures – the client being one such pressure - will impact both positively and negatively. How the forces for improving sustainability will impact on the nature of contracts and contract documentation will depend on such external pressures. It is a two way process and either way it is necessary for consideration to be given as to how, if at all, the contract conditions make such provision or whether it simply becomes a part of the other contract documentation. The principal factor that will determine this is how the design is developed within the procurement process because the contract reflects that process and needs to provide accordingly.

Many contracts already include performance requirements rather than set out a single design solution. The use of performance requirements is necessary in those instances where the provider is to design/provide a solution and facilitates the possibility of obtaining a number of possible solutions that satisfy such requirements. The use of performance requirements may also maintain a competitive element. It is a system that is in part dependent upon the procurement process but one that works well in those areas where the designer/provider has specialist expertise. It may be that a fixed price can be quoted but where the risks associated with providing a particular solution is high some other form of payment may be appropriate. Performance requirements are for situations where it is known what is wanted but not necessarily how it is to be satisfied thus providing a legal requirement to perform but not necessarily for a set price.

¹³ As reported in RICS Modus June 2015 at page 13

¹⁴ JCT Building a sustainable future together at paragraph 6, page 3

The use of performance requirements can be extended to sustainability in those instances where the outcome to be achieved can be precisely stated: for instance, by requiring the home to comply with a specified level under the Code for Sustainable Homes: an approach that can provide an enforceable legal framework. The question then becomes not a legal one but a commercial one as clients will be asking whether it makes commercial sense to adopt such requirements. So much as to what is deliverable in terms of sustainability is dependent upon the building promoter and it is for this reason that legislation and contract provisions may well play an important part for some time to come.

The future

Modelling sustainable buildings (facilitated by developments in BIM) will grow rapidly over the next few years and as it does construction procurement will adapt. For some a change in the procurement process will facilitate the development of such modelling and the importance of sustainability is a particularly good reason for this to arise. Changes in procurement will impact on the nature of construction contracts but not necessarily in the way some may anticipate. The traditional type of construction contract will almost certainly still exist for many years to come but other contracts will also emerge – that is, contracts that reflect construction more as a clearly defined manufacturing process yet one that nevertheless facilitates bespoke solutions. Even so this will only go a small way to tackling sustainability because, as previously mentioned, there are much bigger issues. The answers we provide to the philosophical questions referred to elsewhere will have the greatest impact.

Conclusion

- There is no single answer as to how we go about tackling the problem of sustainability but the question must remain at the forefront of our minds so that we act in a meaningful way and differently to the way we have done in the past. As we change, the impact upon construction and construction projects will be seen. This change has started and it will gather pace. For some businesses it will be an opportunity, for others it will be their demise. Inevitably, growth will start to be seen differently.
- Promoters of construction should take the lead in sustainability by setting out requirements in their project brief but where they do not do so, they should be, at the very least, an active participant in the provision of buildings that better meet the objectives of sustainability.
- The procurement process, the nature of integration in that process (especially at the design stage) but more particularly the ability of those charged with that responsibility will greatly influence the nature of any sustainable outcomes. The earlier the supply chain is brought into the design process the better. The greatest benefits with regard to producing sustainable solutions arise at the design stage but

only when design and construction are considered together. BIM will assist this process.

- The conditions of the respective contracts and the contracts as a whole will play an important part because there exists a two way process between the development of contracts and those other factors involved in defining and fulfilling sustainability objectives.
- There is no imperative for the inclusion of specific sustainability provisions in the contract conditions because sustainability should be a normal consideration within the design process: designers should have sufficient knowledge of the construction processes to ensure that a proper sustainable solution is provided. However, in practice, this currently is not generally the case. Until consideration of sustainability is embedded in the construction industry (including its clients) and it is inherent in the actions of its practitioners there are very good reasons for the inclusion of sustainability provisions in each of the various contracts of those carrying out design and construction. That is because in providing such conditions they not only promote sustainability, influence behaviour and educate, they also provide a framework for continuous improvement.
- Although there is an argument to support the view that we should strive to establish legally enforceable conditions governing sustainability, it is a big step from using targets as a driver of continuous improvement to that of setting requirements that must be met.
- Professional advisors are generally judged against a standard of reasonable skill and care and need to be aware that as our approach and understanding of sustainability develops what is considered reasonable will change: the bar as to what is reasonable will rise. The tension that sometimes exists between practitioners and client will likely be more in evidence.
- There is a need to continue to identify credible measurable targets both for specific items and the whole building performance: benchmarking is essential.
- The use of environmental schemes by which to judge projects has merit but it is necessary that practitioners fully understand their operation and limitations; and also ensure their client is on board.
- There is good reason for the inclusion in the specification or other similar documents (rather than contract conditions) of the technical requirements related to sustainability. Although, for the present, it is evident that both the contract conditions and the specification etc. have a role in promoting sustainability as well as providing a legal framework.

- How far contracts and contract clauses will change in response to sustainability depends on many things but the more important ones include the legislative process, commercial opportunities and threats, changes in societal values and, of course, the procurement process. Although it has been suggested that it is incentives that create behavioural change, not rules, one must not overlook the fact that they can work together in a classic 'carrot and stick' fashion.
- The fact that the issue of sustainability goes beyond our ken must not prevent us from tackling those problems that we can address, however small they might appear. The knock-on effect of doing so should not be underestimated.