

Arup**ProjectManagement**

Office of Government
Commerce

**Partnering Contract
Review**

Report of 25 September
2008

ARUP

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Review**

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The Liaison Process

Executive Summary and Criteria for Assessment

Chapter One

1 Executive Summary of Conclusions

Background

The Office for Government Commerce (OGC) appointed Arup to carry out a review of the following construction contracts;

- NEC3 Engineering and Construction Contract (together with the associated professional appointment and subcontract documents);
- ACA Project Partnering Contract (2000, amended 2003) (together with the associated Specialist Contract for Project Partnering); and
- JCT Constructing Excellence Contract (2006).

They were reviewed against the criteria of satisfying the principles set out in the Achieving Excellence in Construction initiative concentrating, on a set of Evaluation Criteria provided by OGC.

Summary

Each contract reviewed satisfies OGC's Evaluation Criteria. Each contract reviewed would enable parties, using them correctly, to achieve OGC's Achieving Excellence in Construction standards from which the Evaluation Criteria are derived. This report sets out the analysis of how the Evaluation Criteria are satisfied and exceeded.

No single contract is superior to the other two in all respects – each has its own strengths and weaknesses and each is highly adaptable. The difference in the way that each contract is applied by users will be at least as significant as the differences in the processes or terms and conditions provided within the contract.

Residual Risks

Each contract provides its own approach to planning for and resolving the difficulties that can arise when delivering construction and engineering projects. These processes are different to those in traditional construction contracts and are necessarily complex. This means that all require a high level of activity and preparatory work throughout the procurement phase and during the construction phase in order to operate as intended. If this is not done there is a substantial risk that it will not be possible to operate the contract properly. This will cause difficulty in delivering the works and will not enable them to deliver the results of reducing

difference and disputes, that is to say they won't work either as "Partnering Contracts" or "regular contracts". For this reason the mere selection or execution of a particular form cannot, on its own, assure success.

When the contracts are used it is necessary for the parties to adapt them by completing the details of their project and recording their bargain. However if the standard form terms are substantially changed or amended this may mean that the terms no longer satisfy the Evaluation Criteria.

A conclusion as to the relative merits of the contracts for specific types of construction and engineering work as against each other cannot be reached using the Evaluation Criteria alone.

1.1 Summary of Instructions

The market has provided several forms of contract for construction and engineering works and related services; at present only the New Engineering Contract forms including the Engineering and Construction Contract (Third Edition) have received an endorsement from the Office of Government Commerce (OGC).

Questions have been asked whether the Association for Consulting Architects (ACA) Project Partnering Contract 2000 (PPC 2000) and the Joint Contracts Tribunal (JCT) form JCT Constructing Excellence (JCT Consulting Excellence) should also receive similar endorsements and in order to consider this question objectively OGC has initiated the present independent contract review.

Accordingly Arup has been commissioned by OGC to conduct the independent review of the three forms of contract and associated supporting documentation. The review has considered the extent to which the three families of partnering contract satisfy the criteria for Achieving Excellence in Construction as codified in the Evaluation Criteria provided by OGC.

In order to maintain the independence of this review no reference has been made to any prior exercises considering these issues that have been carried out by OGC or on its behalf. Such information as may be available or previously commissioned by OGC has neither been provided nor sought by the review team.

Arup's review team has developed an Evaluation Model to enable the contracts to be assessed against the Evaluation Criteria. The purpose of the Evaluation Model is to achieve consistency of analysis, clarity and accessibility in presentation and comparability across the differing forms.

OGC has given instruction that this is not to be a legal review of the forms under consideration. Accordingly the review focuses on process and practice rather than relative legal merits or questions of enforceability and liability. In particular the application of the provisions of EU Competition Law have not been considered.

This review does not examine the degree to which a sound health and safety culture is inculcated or the extent or effectiveness of any environmental or sustainability provisions. These issues have not been researched as they merit separate consideration by specialists in those respective fields if they are in issue.

1.2 Scope of Review and Evaluation Criteria

The following forms of contract are within the scope of the exercise and were identified to Arup for review by OGC. No other forms were identified for review nor have they been reviewed as part of this exercise.

1.2.1 NEC3

- The NEC 3 Engineering and Construction Contract of June 2005;
- The NEC 3 Professional Services Contract;
- The NEC3 Engineering and Construction Subcontract.

The Engineering and Construction Contract has been considered as a single form of contract to the extent possible because it is not practicable to review each of the Main Option Clauses as separate forms of contract within the review time frame.

1.2.2 PPC 2000

- The ACA's Standard Form of Contract for Project Partnering published in 2003 (PPC 2000);
- Specialist Contract for Project Partnering (SPC 2000).

1.2.3 JCT: Constructing Excellence

- The JCT Construction Excellence Contract of 2006 (JCT Consulting Excellence).

This contract can be adapted for procurement of works or procurement of services.

These contracts were to be considered in accordance with the general approach to the encouragement of collaborative working arrangements set out in the Achieving Excellence in Construction initiative. The review concentrated on the following Evaluation Criteria provided by OGC:

- Encouragement of collaborative working
- Encouragement of project processes necessary for successful projects
- Encouragement of the achievement of value
- Encouragement of supply chain management
- Encouragement of dispute prevention
- Encouragement of early dispute resolution
- Provision of processes for dealing with variation control and pricing
- Incentivisation of supply chain performance
- Encouragement of risk management
- Encouragement of client and supply chain involvement in design development
- Provisions for performance management
- Provisions for risk allocation
- Clear provisions regarding variation pricing and impact of variations on programme
- User friendliness of the documentation

1.3 Structure of Report

This report evaluates the contracts indicated in the scope above and seeks to reach a conclusion on the question:

“To what extent does this partnering contract satisfy the principles of Achieving Excellence in Construction?”

This report comprises the following 5 sections.

Section One: Executive Summary and Criteria for Assessment

The conclusions of the review are stated as an executive summary at the beginning of this section. This executive summary provides a single accessible point for the key findings of the review.

This section also describes the methodology followed and cites the OGC's Evaluation Criteria. It describes the Evaluation Model against which the partnering contracts have been reviewed.

Sections Two to Four: The Review of the Partnering Contracts

Each chapter covers one family of forms:

- Chapter 2 considers the NEC forms;
- Chapter 3 considers the ACA forms;
- Chapter 4 considers JCT Constructing Excellence.

Each section comprises a synopsis of performance against the Evaluation Criteria and notes the considerations for the family of contracts under review. The chapter then follows the Evaluation Model and provides prose analysis and comments on the form. These are then summarised in a tabular format that forms the conclusion to the chapter.

The Evaluation Model has been used to assess each of the partnering contracts and the processes established by each against the Criteria for Achieving Excellence in Construction.

If a contract form departs from a particular tenet of the Criteria for Achieving Excellence in Construction then the nature and consequence of this has been considered and its impact assessed.

Section Five: the Partnering Contracts Compared, Contrasted and Applied

The final section draws together the conclusions from the review and considers the merits of the contracts in practice. These have been gathered according to three themes: Product, Practice and Policy.

Appendices

Supporting data and information is provided in appendices. We have sought to provide focussed information so this is limited to data from the liaison process and associated reference materials.

1.4 Methodology

1.4.1 Description of the Assessment Tools

The assessment tools have been used to evaluate the contract forms. There are three assessment tools:

- The Evaluation Criteria: provided by OGC;
- The Evaluation Model: developed by Arup;
- The Evaluation Categories: developed by Arup.

1. The **Evaluation Criteria** are those provided by OGC and are common for all of the contracts.
2. The **Evaluation Model** is a common format or template developed by Arup to review the contracts. It is divided into three parts:
 - Part 1: Pre-Construction and Procurement;
 - Part 2: Construction Phase;
 - Part 3: Post Construction and Operation.

Each of the parts is subdivided. The Evaluation Model and its subdivisions highlight processes that are the key focus points in procurement and project management practice. The whole process is considered and specific clauses are identified to assist where relevant.

3. The **Evaluation Category** is a statement reflecting the type of compliance and degree to which the process considered achieves the Evaluation Criteria. The list of Evaluation Categories was developed by Arup to describe the range of possible outcomes that might have been observed when reviewing the contracts against the Evaluation Criteria using the Evaluation Model.

The categories were developed to form a scaled range from the “Best Practice” to “Major Non-Compliance”. The Model and the categories were developed in full before the review phase of the exercise. Some of the categories that were defined were not observed during the course of the subsequent review.

1.5 Rationale for use of Evaluation Model and Evaluation Criteria

Each of the contracts has its own method and ethos – if the same problem is encountered it is likely to have a different process or even a different solution. The review exercise is not a comprehensive comparison between the forms but an assessment of whether different contracts achieve the Evaluation Criteria. The forms themselves are applied on real projects and unless this is taken into account there is the risk that the evaluation exercise will be too abstract. There is therefore a need to assure parity and maximise objectivity in the independent review exercise.

The Evaluation Categories were developed to describe the extent to which the contracts achieved, deviated from or ran counter to the Evaluation Criteria. They were developed before the exercise of reviewing the contracts in the Evaluation Model. It was considered that it was important to distinguish the extent to which a compliance or non-compliance could be observed. This was particularly so as the criteria were not weighted.

The exercise of assessing whether or not the contracts achieve the Evaluation Criteria is not empirical. A degree of judgement is therefore inherent within any assessment against the criteria. Similarly experience with other forms of contract including forms not reviewed has contributed to benchmarking the contracts reviewed. The statement of categories accepts this on the one hand and is a prompt to ensure consistency and even handedness on the other whilst at the same time providing assistance to the reviewers by keeping the achievement of the Criteria in focus.

1.6 The Assessment Tools

1.6.1 OGC EVALUATION CRITERIA

- Encouragement of collaborative working
- Encouragement of project processes necessary for successful projects
- Encouragement of the achievement of value
- Encouragement of supply chain management

- Encouragement of dispute prevention
- Encouragement of early dispute resolution
- Provision of processes for dealing with variation control and pricing
- Incentivisation of supply chain performance
- Encouragement of risk management
- Encouragement of client and supply chain involvement in design development
- Provisions for performance management
- Provisions for risk allocation
- Clear provisions regarding variation pricing and impact of variations on programme
- User friendliness of the documentation

1.6.2 EVALUATION MODEL

The Evaluation Model was developed by Arup for the purposes of this review exercise.

Part One: Pre-Construction & Procurement Processes

Processes and activity to be carried out before the construction works begin including the provision of advice and design services:

1. Process that clarifies objectives;
2. Process for clarifying the deliverable;
3. Processes for developing project documentation;
4. Commencement Processes.

Part Two: Construction Phase

From start on site to the end of the construction activity and transition to the point that the project is operational:

1. Process for access to work sites;
2. Payment processes; are they clear, fair and effective?;
3. Change process;
4. Process for record keeping and communication;

5. Programming, status of programme and progress against it;
6. Design development and tracking of design change;
7. Process for resolving differences;
8. Management and coordination.

Part Three: Post-Construction & Operation

Project conclusion, close out and beginning of operations:

1. Integration into the property/asset portfolio for delivery of primary purpose;
2. Activity and Works Post Construction Phase: corrections, slips etc;
3. Settlement of monies due (hand back of bonds etc);
4. Dispute Resolution Processes.

1.6.3 EVALUATION CATEGORIES

The Evaluation Categories were developed by Arup for the purposes of this exercise to describe the extent to which the processes reviewed achieve the Evaluation Criteria. The categories are summarised in the table below and are set out in full underneath the table.

Category 1 Leading Excellence in Construction	Band A : Best Practice
	Band B : Encouraged
Category 2 Achieving Excellence in Construction	Band A : Compliant
	Band B : Silent Compliance
Category 3 Minor Non-Compliance	Band A : Achieving Excellence in Construction Not Encouraged
	Band B : Not Compliant with Achieving Excellence in Construction Excellence
Category 4 Opposing Excellence in Construction	Major Non-Compliance or deviation from Achieving Excellence in Construction

Category 1: Leading Excellence in Construction

Band A: Best Practice

- The procedural standard to aspire to that will assist in delivering projects.
- The process is clear and applicable and has certain outcomes and is simple to apply correctly.
- The linkage with other processes will be clear and complementary.
- OGC's Evaluation Criteria, Achieving Excellence in Construction and other drivers consistent with it are at the heart of the process.

Band B: Encouraged

- A high procedural standard that encourages achieving the OGC's Evaluation Criteria.
- The level achieved is clearly beyond a bare compliance and the process will encourage behaviour that is consistent with the criteria.
- The process is structured in a plausible usable way that stands a good chance of being applied correctly in practice and without contradicting other processes.
- In distinction with Band A of Category 1 Band B might be improved in terms of clarity of expression or interaction with other contract processes.

Category 2: Achieving Excellence in Construction

Band A: Compliant

- The process achieves a compliance and consistency with the Evaluation Criteria.
- The compliance may be mechanical rather than reasoned in that the operation has little impact on the behaviour or preparation action in consequence of its existence.

- This would include procedures where the criteria are not directly addressed but where they are complied with by reference to terms or definitions that include accord with the Criteria for achieving excellence.

Band B: Silent Compliance

- This category is included to cover most administrative procedures or “boiler plate” procedures where no positive push or pull is either required or perhaps appropriate.

Category 3: Minor Non-Compliance

Band A: Achieving Excellence in Construction Not Encouraged

- Where an opportunity to encourage practice consistent with the Evaluation Criteria or Achieving Excellence in Construction is missed and the process instead permits behaviour that is not consistent.
- To be distinguished from Category 2 Band B as the process is not administrative.

Band B: Not Compliant with Achieving Excellence in Construction Excellence

- A procedure that does not achieve the standards set in the Evaluation Criteria stated in Achieving Excellence in Construction.
- Following such a procedure will deliver a result that is not compliant with the criteria.

Category 4: Opposing Excellence in Construction

Major Non-Compliance or deviation from Achieving Excellence in Construction

- A procedure that is of critical importance that actively encourages a result that is not consistent with Constructing Excellence or runs counter to the Evaluation Criteria.
- Distinguished from Category 3 by an encouragement towards the antithesis of or display of a fundamental opposition towards the Evaluation Criteria.

1.7 Liaison with Drafting Bodies

During the course of May and June 2008 a liaison process took place between the drafting bodies responsible for the publication of the contracts and Arup's review team.

In the first stage a set of questions was put to each of the drafting bodies who each provided written answers. The same document was provided to each drafting bodies, this stated the Evaluation Criteria and what was termed the "overarching question":

"To what extent does this contract satisfy the principles of Achieving Excellence in Construction?"

The questions were focussed on three distinct areas:

- The first concerned the products that the drafting bodies were providing to the market including the degree to which they were dependant on the purchase or provision of further services;
- The second concerned practice and usage of the forms;
- The final questions concerned policy and best practice initiatives.

The second stage of the liaison process was a meeting between the representatives of the drafting bodies and members of the review team. The purpose of this was to explore matters raised in the answers to the questions. The meeting also afforded an opportunity to the drafting bodies to meet the review team and ensure that the unique features of their forms had been appreciated and that the review was independent.

Chapter 2

New Engineering Contract

Engineering and Construction Contract Third Edition

Professional Services Contract

2 New Engineering Contract (NEC)

2.1 Performance against Evaluation Criteria: Synopsis

2.1.1 Encouragement of collaborative working

The NEC form requires close and interlinked activity from the participants in order to function correctly – in this respect the process led mechanism relies on the collaboration of its users in order to function. The Core Clauses of the NEC forms provide for the parties to act in a spirit of mutual trust and cooperation and whilst it can be difficult to be certain what the scope of such a provision might be, it is generally apparent when it is not being achieved.

A secondary option, “Option X12: Partnering”, exists to enhance the tools for collaboration that are provided by the core NEC and it changes a contract that has collaborative elements into a partnering contract. Adopting the Option X12 places the techniques of collaborative construction at the centre of the relationship between the parties through the addition of further mechanisms.

2.1.2 Encouragement of project processes necessary for successful projects

The NEC forms contain a number of processes designed to enable both parties to achieve their definitions of success from a construction project. The forms were specifically developed in order to provide processes that would enable well prepared projects and facilitate clear and timely decisions to be made with an advance appreciation of their consequences. Indeed it might be argued that NEC promotes the obligation to perform a process and the by-product of the process is the successful outcome, with the core conviction being that performing the former makes the latter inevitable.

2.1.3 Encouragement of the achievement of value

“Value” is a term that needs definition, particularly in the context of public procurement because it means different things to different people depending on when it is considered. However the provisions of NEC are admirably adaptable to take account of the balance of values that are chosen to be delivered in any given

project. Like other forms a degree of skill and knowledge is required to deliver a project that applies the NEC methods however resource that is deployed on planning, preparation and project management is an investment in the outcome of the project and a means of increasing certainty of the outcome in accordance with whatever the value focus may be.

2.1.4 Encouragement of supply chain management

A variety of tools are provided for the management of the supply chain. The process for communication and distribution of information assists in transmitting information up and down the supply chain.

The NEC provides for Early Warnings to be given and for the convening of those who can address the problem giving rise to the warning. This is likely to include works contractors and equipment manufacturers when relevant.

NEC is a complete method of working with versions specifically developed for professional services and sub-contract works so that the use of the form can be consistent throughout the supply chain. The use of the compatible forms of contract has considerable benefit in terms of consistency of time periods and processes particularly in respect of early warnings and programme management. NEC was one of the first forms of construction contract that was available with so complete an array. It provides a compatible and ideologically coherent set of documents that complement each other wherever they are used in the supply chain.

The supply chain is unlikely to be completely transparent unless the terms are amended – that is to say the Employer does not receive information from the sub-contractors on an open book basis.

2.1.5 Encouragement of dispute prevention

NEC seeks to minimise the scale and range of matters that can give rise to disputes and looks to put in place a system of agreeing the outcomes of matters of difference in advance and before they mature into disputes. The Third Edition of NEC provides for the use of a risk register which gives visibility to matters that could cause disputes. NEC is as an exhortation to project management and planning

thus dispute prevention is close to the heart of this form of contract and the method of working that it promotes. As with any principle or act of encouragement it will always be a matter for users to apply the principles in their day to day conduct. It would be a mistake to consider that this means that it is a soft contract or that it absolves parties from the consequences of their actions.

2.1.6 Encouragement of early dispute resolution

At the same time as seeking to reduce the scale and scope of disputes NEC seeks to resolve matters that that might remain in dispute swiftly. It is a comprehensive system that prescribes most of the actions that must be taken in a given situation and the consequences for failure. The change process provides for the time and cost consequences of a change to be settled in advance. On the assumption that the contract is for construction works it will be subject to the Housing Grants Act and any dispute or difference can be taken to an adjudicator for a decision at any time and the contract provides a scheme for the conduct of the adjudication process. The provision for merging of disputes at different parts of the supply chain within a single adjudication process before the same Adjudicator is noted.

2.1.7 Provision of processes for dealing with variation control and pricing

NEC is possessed of a comprehensive system for dealing with change and pricing of change. Much of this is administered through the Compensation Event mechanism. If applied correctly it will enable the cost and time consequences of future change to be resolved in advance of the change taking effect. These provisions can be difficult to apply in practice and they do require skill and understanding to administrate and apply. Skill alone is not enough - the resource required to discharge this function ought not to be underestimated. The Compensation Event scheme is an example of resource being deployed on the management of the project at the right moment. It should aid in the achievement of successful outcomes through the timely administration of points of difference without dispute.

2.1.8 Incentivisation of supply chain performance

Setting aside the base line bargain of a sum being paid for goods and services provided, NEC enables the parties to reward the method by which the provision of the goods and services is achieved. There is negative and positive pressure to

achieve this. An example of the negative pressure is the requirement to provide a programme that is reinforced by a retention clause such that 25% of the price for work done will be retained until a first programme is submitted. An example of positive pressure includes the option to provide for a bonus for early completion or to develop Key Performance Indicators that reinforce positive behaviour.

2.1.9 Encouragement of risk management

The contract requires the parties to give each other warning of matters that could effect the time or cost of delivering the specified works on programme. The process is intended to be operated with a problem solving outlook and provides for a meeting of those who can affect the outcome to be convened – which should include sub contractors where relevant.

These risk items and the actions required to address them are tracked in the risk register which also identifies specific risk points that the parties identify at the outset.

In addition to the Compensation Event mechanism the contract also provides a list of Employer's and Contractor's risks which serves to identify the base line responsibility for certain events that might occur during the course of a given project.

2.1.10 Encouragement of client and supply chain involvement in design development

NEC contracts permit the parties to define the design input required of the project participants in general and the Employer and Contractor in particular. In this respect a contract let under any of the Primary Options could be a "Design and Build" or "Employer's Design" contract depending on the extent to which the design has been developed and is to be developed.

The extent that the supply chain or client are involved in design development is essentially a matter for the project participants to decide when they set up the contract. If this is a matter of particular importance the parties might consider use of Option X12 to facilitate closer contact with subcontracted designers or suppliers of equipment that requires design development. Equally the Works Information for the project could be developed to provide for this interface. The contract is

sufficiently flexible to accommodate the Employer seeking design change within its Compensation Event regime.

2.1.11 Provisions for performance management

A range of options for managing the performance of the parties is provided. Notable amongst these is the option to develop Key Performance Indicators that can be tied to payment. The contract also includes options concerning performance such as early completion bonus, low performance and "liquidated" damages. Whilst each mechanism can be of value if applied to the right project none represents a panacea or replacement for sound practice.

2.1.12 Provisions for risk allocation

The NEC contracts allocate responsibility for risk and provide for advance management of risk by means of a risk register, programming regime and early warning system. The contract contains a statement of the risks that are retained by each of the parties and has a section stating the requirements in respect of insurance provision which the parties must complete. Risk allocation is also part of purpose of the flexibility that exists to develop additional project specific compensation events to supplement those provided in the standard documentation.

2.1.13 Clear provisions regarding variation pricing and impact of variations on programme

These forms of contract place the tracking of activity in a programme high on the agenda. The obligation to provide and update a programme is a fundamental provision of the NEC form and is intertwined with the contract's change provisions. A demand for high performance in the administration of the contract is placed on both parties.

2.1.14 User friendliness of the documentation.

In its structure as a modular contract comprised of Core Clauses supported by primary and secondary options, the matrix of clauses that is NEC is readily understandable. It is comprehensive in that it can be successfully used throughout the supply chain.

Experience with the form will overcome the user difficulty experienced when migrating from other forms of contract however there are provisions of the contract that require professional study before they can be applied successfully.

2.2 Evaluation Model

2.2.1 Part One: Pre-Construction & Procurement Processes

Processes and activity to be carried out before the construction works begin including the provision of advice and design services:

2.2.1.1 Process that clarifies objectives

In developing the content of the Contract Data and Works Information the Employer and his advisors will be compelled to address his objectives and requirements. The terms of the contract and its composition of Primary and Secondary Options is similarly structured to provoke the consideration of objectives in order that the documentation can be concluded and assembled into a contract.

This is reinforced by the adverse commercial consequences of going to contract with incomplete Works Information as the changes to the Works Information are likely to be to the account of the Employer. If an Employer requires effective cost certainty he would be well advised to prepare the Works Information thoroughly and in advance and minimise reliance on the change provisions.

The contract requires clear decision making and thorough pre-contract preparation in order for the Employer to gain its benefits. In this respect these provisions encourage project based decision making however it is up to the parties, and in particular the Employer, to achieve this. The attendant risk is that if this investment is not made, the degree of change can be substantial and this can result in adverse or at least unexpected time and cost outcomes.

Based on standard:

Evaluation Category 2 Band A

If Options X20 & X12 are used

The provision for developing and introducing job specific Key Performance Indicators to apply to both the Employer and Contractor can encourage and then maintain the focus on the objectives of the parties.

If the Parties select the X12 Partnering Option this will bring in a specific requirement to consider and identify the objectives of the Employer and the other “partners”. The Standard NEC form requires the giving of Early Warning Notices however this is enhanced if the X12 Option is selected as an Early Warning will also be required if these identified *objectives* are threatened.

This can enable changes to the operation or even the obligations of the contract to retarget attention on attaining the objectives as opposed to the stated deliverables. The provision of a process to re-track towards objectives and manage the cost consequences encourages the prevention of disputes.

Whilst this represents a prospect for change it should be noted that this change is driven towards the Employer's objectives in a way that is consistent with the Achieving Excellence in Construction principles.

Evaluation Category 1 Band A

2.2.1.2 Process for clarifying the deliverable

Planning in advance is one of the key project processes for delivering successful projects and is substantially encouraged by the Achieving Excellence in Construction principles. The NEC forms demand a high degree of advance planning for the preparation and development of the Works Information in order to function effectively and for users to gain the most out of them.

The Works Information is the constant reference point to determine responsibilities and is used in conjunction with the terms and conditions. It should be noted that the Works Information is not a static document and will be adjusted during the term of the project when instructions are given and change is made to the Works.

The responsibility for design will depend on the content of the Works Information and the completeness of it. Other points of reference (such as the RIBA stages) are required to describe the level to which the preparation of the contract has reached. Whilst this is an issue of general application it should be noted that the achievement of such standards can themselves be subjective. The degree to which a design has been carried out to RIBA Stage C or Stage D and the boundary between these can be a matter of opinion and this will need to be recognised when framing the Works Information.

The NEC forms provide for the appointment of a separate Supervisor whose role focuses on the quality of the deliverable. It is important to define the inspection and testing regime in the Works Information.

The NEC forms do not make provision for tendering processes for a contract nor do they provide any process to achieve compliance with any associated regulations – in particular the Public Contracts Regulations 2006.

These processes encourage the achievement of the Evaluation Criteria. However it remains essentially a matter for the parties to take the initiative and ensure thoughtful and thorough preparation to clarify the deliverable. This responsibility will fall upon the Employer and mostly on the Project Manager he selects and it tested during the tender process in particular.

Evaluation Category 1 Band B

If either of Options X20 or X12 are selected then the skilful development of KPI can clarify the deliverables. These can be drafted in a way that will encourage management of the supply chain. This can be further enhanced by developing positive incentives for achieving these KPI and negative consequences for failing to achieve them.

Evaluation Category 1 Band B

2.2.1.3 Processes for developing project documentation

NEC is a matrix of terms and conditions described as Options that can be compiled to form a contract. It is a base set of core clauses that require the selection of a

single Primary Option in order to define the commercial and payment base of the contract and then the selection of any of a number of Secondary Options. The difference between the Primary Options is substantial to the extent that they amount to totally separate commercial models and require distinct project management techniques from the parties.

The Contract requires the parties to provide the contents of the Works Information and one of the most significant elements of this is clearly the design information and specification (see section on Design Development below at Clause 2.16.6). The regime for testing and commissioning should also be stated in the Works Information in advance.

The Contract provides an effective process for the development of a programme by the Contractor (See Clause 31.1 and the section on Programming herein) this process supports good project management particularly as there is a requirement to keep the programme current. Notwithstanding the presence of contract terms the Project Manager will still need to give the process impetus.

The forms contain a limited degree of “boilerplate” – whilst the NEC Forms do contain entire agreement clauses they intentionally seek to reduce verbage and legal clutter as a matter of style and preference.

Evaluation Category 1 Band B

2.2.1.4 Commencement Processes

The contract makes provisions for access to site and coordination of activity on site (Clauses 30.1 and 33.1).

The standard form contains a pro forma section of "Contract Data" where the information that describes the project and the specifics of the terms agreed by the parties are concentrated. This is to be completed before the execution of the Contract and its nuances must be appreciated in the early stages where it needs to be acted upon.

If the relevant secondary options have been selected then the commencement of the partnering arrangements and working up of KPI will be a fundamental activity to be completed during the period surrounding the execution of the contract and the beginning of the Works.

A considerable amount of activity is required of the parties at a critical and resource intensive phase of a project. It is common for this not to be appreciated irrespective of the contract form used but it can be particularly testing when NEC is used for the first time. If the preparation has been carried out and the communication processes are followed from the outset then the difficulties inherent in the commencement of any project are less likely to cause problems for the NEC user.

Evaluation Category 2 Band A

2.2.2 Part Two: Construction Phase

From start on site to the end of the construction activity and transition to the point that the project is operational

2.2.2.1 Process for access to work sites

Terms to describe the site and areas associated with the site are provided in the terms. These broadly defer to the contents of the Works Information for details access arrangements and the sharing of access with others.

Evaluation Category 2 Band A

2.2.2.2 Payment processes are they clear, fair and effective?

Each of the NEC Primary Options forms a separate method for the pricing of and payment for the activity of the Contractor.

Whilst the principle stated in the Core Clauses is simple, some complexity is necessarily introduced by each of the Principal Options to make these Core Clauses function. Each of the Primary Options is to be applied in its own way.

The change procedures will have an impact upon the sums of money to be paid. This introduces a considerable degree of latitude in working out the outturn cost when variations add to the work required to deliver the project. Note that it is likely that any optional Pain Share/Gain Share provisions for a share of the cost above a certain sum will be adjusted to take account of the change in the scope of the works.

As with other standard form contracts where the matter can resolve to the opinion of one of the participants this can be divisive – for example in relation to the consequences of a failure to give an Early Warning.

In considering the user friendliness of the information, it is also the case that there are a number of adjustments that might be made to the sums due. An example is in relation to testing and defects in clause 40.5 and 45.1. These are not all in the “payments” part of the contract but will need to be taken into account and managed whenever they are relevant.

Difficulties in the mechanics of some of the NEC payment terms should be considered against the successful drive toward achieving value and risk management that these forms encourage when they are used and have spearheaded within the industry. An example of this would be the introduction of effective “pain share/gain share” mechanisms and the positive uptake of these in the market.

Similarly the NEC drive towards focussing upon payment for achieving specific process goals can have a positive impact. The requirement to report information increases and encourages higher levels of project management performance.

The standard of user skill required to prepare and operate this contract is quite high however this is largely a matter of gaining experience and awareness.

It is for these reasons that users seeking to implement the principles of Achieving Excellence in Construction will need to take account of the necessary planning and preparation based on an appreciation of the purpose for which that information is required. Adherence to that information once it has been set down will reduce and indeed avoid much difficulty. This is of particular importance in relation to applying the payment clauses.

Evaluation Category 1 Band B

2.2.2.3 Change process

NEC forms are able to provide users with a great deal of flexibility and it is possible to encompass a substantial degree of change and adaptation. The NEC change processes are designed to address matters clearly and completely in advance of the change. If operated effectively and in conjunction with the programming and reporting processes of the contract, these can assist reducing the number and range of potential disputes and track the project to a successful completion.

The NEC Contract makes provision for instructions to be given by the Project Manager. The interaction between correspondence, decision making and the change process is complete. The failure to operate the contract is to be taken into account in the change processes to the extent that it may be necessary to change the time for completion and the prices if the Project Manager fails to correspond in time (Clause 60.6). This is certainly an encouragement to keep ones correspondence up to date and is consistent with successful projects.

The terms provide that the Compensation Event provisions are the only way that the parties can take account of Changes and that no further rights exist under the contract (Clause 63.4).

The procedural base of the change processes in Clause 60 to 65 is such that a substantial degree of latitude is removed once the process is begun with the effect that the process must reach one of the defined conclusions stated in the contract. This mechanistic removal of discretion is designed to force issues to a project management resolution on a managed time line. The aim is to determine consequences of time and cost for the project and help assess the impact upon any other projects.

The complete preparation of the Works Information is essential as the Works Information will play a significant part in defining the risks that the parties bear. Also the change process will expose the shortcomings in the Works Information and these will ultimately be addressed through the Compensation Event process. This change process will also interact with any selected option or adaptation such as the inclusion of KPI or a Pain/Gain Share mechanism.

Two key issues arise in practice the first is the requirement to operate the processes correctly and the second is the need to achieve a working balance for the appropriate volume and scope of changes that will be managed as Compensation events. This is consistent with NEC's management approach in that it places reliance upon the experience of Project Managers.

Evaluation Category 2 Band A

2.2.2.4 Process for record keeping and communication

It might be said that communication lies at the heart of NEC forms of contract. The regime for the provision of information, the time for delivery and the consequences for non-provision are at the core of the contract and essential to its proper application. NEC is designed to promote the active and forward looking management of projects.

There is a focus on problem solving that can be seen in the requirement for Early Warnings and a "living" risk register that is updated to take account of events (Clause 11.14).

The contract provides terms to support the form, status and timetable for communication. This includes the provision that silence or failure to correspond will have time and money consequences. This means that the event itself won't have the consequences it otherwise might. The effect is that a different time for completion will result or sum of money will be payable as a direct consequence of the failure to correspond (Clauses 61.3 and 61.4). This is strict but provides a real spur to good practice and performance.

Whilst there is a substantial volume of information that must be communicated the aim of this is the encouragement of risk management and the delivery of successful projects. The NEC provisions for communications are complete and coordinated and a clear best practice standard. Indeed if the parties are capable and effective in their communications then many of the difficulties that can be experienced in the change processes will be overcome.

Evaluation Category 1 Band A

2.2.2.5 Programming & status of programme & progress against it

One of the key categories of information to be provided by all parties using an NEC contract is information about activity and progress. The details of the NEC programming arrangements are clear and conducive to good project management and delivery of a project without drawn out disputes. The provisions aid the consideration of the consequences of change and the effect of change upon the supply chain and as such are in accord with the Evaluation Criteria for Achieving Excellence in Construction projects.

Evaluation Category 1 Band A

2.2.2.6 Design Development & tracking of design change

The contract makes provision for the level of design activity required of the contractor to be defined by the Works Information (Clause 21.1 to 3). This is very flexible and in effect if the Works Information contains a performance specification the project is to be a design and build contract. Whereas if it contains a full design

the Contractor's responsibility for design will be on a more traditional "Employer's Design" basis.

The communications regime and Compensation Event provisions when coupled with the provision to give instructions provide a clear basis for the development of design and the tracking and scrutiny of design change. Note however that there is likely to be a limited degree of transparency as to actions at sub-contract level as there is no express best value provision or access to documentation on an open book basis.

Evaluation Category 2 Band A

2.2.2.7 Process for resolving differences

NEC is designed for use in multiple jurisdictions and the contract provides a Secondary Option to take account of the statutory dispute resolution provisions available under current UK legislation. The requirement to take account of such statutory provision is a necessary intrusion into the processes that NEC provides for clear communication and change management.

The contract provides for the giving of Early Warnings, has a requirement for compliance with instructions and states provisions for addressing acts of prevention and proposals for acceleration.

If information is provided in accordance with the Contract then the data and decisions available to a third party decision maker should be largely available to the parties as they perform the contract. This can reduce the need to refer matters to third parties for resolution.

It is also to be noted that the Termination provisions of the contract, whilst complex are comprehensive and do provide clarity of outcome in the event that they are called upon.

Evaluation Category 1 Band B

2.2.2.8 Management and coordination

The processes provided by the contract place acquisition of the information necessary for management and coordination centrally and provide for the tracking of this in the Risk Register and Programme. This is in order that the change can be managed proactively with its time and cost consequences managed in advance of any change taking effect.

The structure of the contract and the processes required of the parties to make use of it and then operate it demonstrate that it is a contract for the management of projects.

Evaluation Category 1: Band A

2.2.3 Part Three: Post-Construction & Operation

Project conclusion, close out and beginning of operations

2.2.3.1 Integration into the property/asset portfolio for delivery of primary purpose

If the Works Information has been completed correctly then the requirement for operations based testing and commissioning should provide a framework for the Supervisor to ensure that the necessary quality assurance has been achieved by the contractor. Note however that the contract does not make provision for a post completion review workshop or performance review.

In addition the requirement for programming information will aid the completion and coordination activities associated with occupation.

Evaluation Category 1 Band B

2.2.3.2 Activity and Works Post Construction Phase: corrections, slips etc.

The Contract provides a regime for the rectification of defective work – both during the contract term and for a period of time after completion. In addition it provides a process for the issue of a defects certificate in all projects that will bring an established end point to the project. If defects are not rectified the cost of rectifying the defect is recovered by the Employer.

Evaluation Category 1 Band A

2.2.3.3 Settlement of money due

A project using the NEC should be correct “on paper” at the time that it is complete “on site”, in that all of the information required to achieve such an outcome should be in the possession of the relevant parties, in consequence of the information provision processes.

All that is to be closed-out in a final account negotiation is to be managed in advance. For example changes of time and money should be decided in advance and then logged through the Compensation Event process.

The ongoing and incremental nature of management and reporting of information with a project using NEC means that in principle the correct management of an NEC based project will obviate the need for a “final account” negotiation.

Evaluation Category 1 Band A

2.2.3.4 Dispute Resolution Processes

Timely dispute avoidance will be the result if the project has been properly put together and properly administered by the parties during its term. Indeed there is an argument that NEC is itself a dispute avoidance process in that it seeks to forestall and or pre-empt the matters that generate, provoke or otherwise promote disputes.

The inverse of this is that projects that have not been set up or run correctly can be difficult to resolve. It may be necessary work out what should have been done procedurally at the relevant point in the project process. Accordingly if the initial processes do not resolve or pre-empt the problem then the dispute resolution clauses will apply. These are a little complex and in the instance of adjudication replace the provisions of the Scheme for construction contracts.

Evaluation Category 2 Band 2

2.3 Summary

Evaluation Model Part		Evaluation Category
Part One: Pre-construction and Procurement Processes	Process that clarifies objectives	Achieving Excellence in Construction: Compliant
	Process for clarifying the deliverable	Leading Excellence in Construction: Encouraged
	Processes for developing project documentation	Leading Excellence in Construction: Encouraged
	Commencement Processes	Achieving Excellence in Construction: Compliant
Part Two: Construction Phase	Process for access to work sites	Achieving Excellence in Construction: Compliant
	Payment processes are they clear, fair and effective	Leading Excellence in Construction: Encouraged
	Change process	Achieving Excellence in Construction: Compliant
	Process for record keeping and communication	Leading Excellence in Construction: Best Practice
	Programming & status of programme & progress against it	Leading Excellence in Construction: Best Practice
	Design development & tracking of design change	Achieving Excellence in Construction: Compliant
	Process for resolving differences	Leading Excellence in Construction: Encouraged
	Management & coordination	Leading Excellence in Construction: Best Practice
Post-construction & Operation	Integration into the property/asset portfolio for delivery of primary purpose	Leading Excellence in Construction: Encouraged
	Activity and works post construction phase: corrections, slips etc	Leading Excellence in Construction: Best Practice

	Settlement of money due	Leading Excellence in Construction: Best Practice
	Dispute resolution processes	Achieving Excellence in Construction: Silent Compliance

Chapter 3

Association Of Consulting Architects

Project Partnering Contract 2000

Specialist Contract for Project Partnering 2000

Association Of Consulting Architects

Project Partnering Contract 2000

3 Project Partnering Contract 2000 (PPC2000)

3.1 Performance against Evaluation Criteria: Synopsis

3.1.1 Encouragement of collaborative working

This contract seeks to place collaborative working at its heart and incorporates processes that it has innovated to encourage users to deliver projects effectively as part of a Partnering Team. The form should not be recommended to users who are not minded to operate the contract with a clear understanding of this principle and an intention to apply it.

3.1.2 Encouragement of project processes necessary for successful projects

PPC is a procurement system that provides the processes and mechanisms for planning, procurement and delivery of construction works. The system is based on the application of a number of processes and it is essential that the processes stated are applied. The encouragement of collaboration is assisted by the creation of a "Core Group".

3.1.3 Encouragement of the achievement of value

The processes put in place by the form can provide advance clarity of the sums of money and time that will be required to deliver a project. PPC is based on a two stage tendering process whereby time and cost data is developed incrementally and reported on an open book basis. This means that there can be a focus on value at all material points and the contract can still enable the parties to withdraw if the value profile is not satisfactory. As noted above there is a need for the parties to define value when they are considering performance against it.

Parties applying the contract correctly will also be keen to maintain a focus upon the achievement of value and continuous improvement. They may refer cost saving, common purchasing suggestions or improvements to the Core Group to consider Clause 23.4 – 5, 24.

3.1.4 Encouragement of supply chain management

PPC provides a direct legal relationship between the supply chain members and further encourages supply chain management in the method for the two stage procurement of sub-contracted Specialists. These specialists can be seconded to the Core Group. The associated SPC 2000 form has been developed by ACA as a back-to-back complement to support to the PPC 2000 form.

The processes put in place by PPC are substantially aimed at communication and management of a Project Team that represents the whole of the supply chain. It should be noted PPC's structure is unusual in that it creates direct legal relationships between the project participants where they would not exist, or would be very different, under a typical construction contract (including the other forms considered in this review).

3.1.5 Encouragement of dispute prevention

PPC provides a variety of mechanisms to find methods to resolve points of difference in the interests of the delivery of the project.

The processes that incrementally develop the scope of the project provide for early involvement of the Contractor and encourage dialogue and open book reporting of information. In so doing the PPC contract seeks to provide clarity and certainty of the details of the project and the responsibilities of the parties in order to reduce the matters that could give rise to dispute.

The creation of a Core Group to guide the project also has a dispute resolution function. This ensures the visibility of problems and any impact of those problems upon the project irrespective of the point in the supply chain at which they are found.

3.1.6 Encouragement of early dispute resolution

In addition to the points noted immediately above it is noted that the contract is innovative in that it provides for the identification of an expert to call upon to give advice on difficult issues. This Partnering Advisor is a third party who can make a contribution to shaping the deliverables but also to the resolution of disputes at a time when they can be contained. This can re-focus the Partnering Team on the delivery of the project.

In providing these processes it is expected that the parties will find that the terms of the contract provide a swifter and more cost effective way of resolving points of difference than they might obtain from other dispute resolution mechanisms available such as adjudication or litigation.

3.1.7 Provision of processes for dealing with variation control and pricing

The contract contains clauses that track the cost and time consequences of change and if operated correctly it will achieve this in advance of the change taking effect. The contract is structured to permit change and encourage all participants to propose a change that will assist in the delivery of the project or improve the operation of the completed project.

3.1.8 Incentivisation of supply chain performance

The contract makes provision for the development of Key Performance Indicators that can be tied to incentive payments. In addition the contract provides clauses that enable the parties to develop further incentives or work up shared savings during the course of the project (clause 13.1, 13.2). The budget and any objectives are also to be taken into account when carrying out design activity.

3.1.9 Encouragement of risk management

The PPC documentation remains in essence a bargain whereby parties take responsibility for certain risk events occurring and responsibility for resolving those problems. However when using PPC the person who is responsible for resolving the problem may get greater assistance or accommodation from other members of

the Partnering Team and this may enable the problem to be mitigated more thoroughly and its negative consequences obviated.

3.1.10 Encouragement of client and supply chain involvement in design development

PPC has a flexible structure that permits the client to procure his design with the assistance of the whole supply chain should he wish. The impetus of the PPC forms is for “early contractor involvement”. This should result in the Client procuring his Constructor at a point in the process where his specialist construction and management skills can have a great impact on the project. There is the latitude to involve a Specialist at this stage however he need not be retained to carry out the construction activity.

Of course if PPC is not used from the beginning of a project and its processes are not applied then it is unlikely to generate such benefits.

3.1.11 Provisions for performance management

PPC enables the Partnering Team to develop a set of performance monitoring tools to track data on matters of key importance. This option provides for the development of Key Performance Indicators so that success, failure and progress is measured by these indicators. This may then be linked to specific payment objectives.

Although PPC contains a collaborative ethos, the application of effective mechanisms such as payment based on KPI and the setting of an Agreed Maximum Price (AMP) over which no profit or overhead can be gained ensure that collaboration does not become an excuse for weak obligations or a “cost plus” model of payment.

3.1.12 Provisions for risk allocation

Clause 18 of PPC 2000 addresses risk management and risk allocation. It provides a set of circumstances where risk events occurring will result in an extension of time to the date for completion. The contract also provides that the Partnering Team is to work together in the management of risk although it leaves how this is to happen to the Partnering Team.

3.1.13 Clear provisions regarding variation pricing and impact of variations on programme

Changes can be suggested by any of the Partnering Team Members. The contract process provides for the consideration of time and cost consequences of proposed changes before the change is instructed. This means that costing and programming choices can be taken into account when deciding whether or not a proposed change ought to be adopted. The data provided for this consideration should be based on the Price Framework, should reference to the Partnering Timetable and the Project Timetable and state any consequential adjustment to the works to be delivered.

Specific consideration is given to the Agreed Maximum Price and the consequences in respect of this when deciding whether a change should be instructed.

3.1.14 User friendliness of the documentation

The PPC 2000 documentation represents a complete procurement and delivery system that is distinct from other forms of contract available. For this reason it requires a fair degree of professional study before it can be applied even if considerable reliance is placed upon the Partnering Advisor.

PPC is a thorough, innovative and comprehensive approach to contracting for construction works. However, the documentation and its drafting is traditional that is to say it is dense and in places legalistic, it also requires an appreciation of the interplay of its detailed procedures. This complexity may put users off reading it and may make it more difficult to apply or less likely to be applied correctly in practice. This is a significant point that goes to practicality and proportionality of PPC as a method of working.

3.2 Evaluation Model

3.2.1 Part One: Pre-Construction & Procurement Processes

Processes and activity to be carried out before the construction works begin including the provision of advice and design services:

3.2.1.1 Process Clarifying Objectives

PPC 2000 seeks to outline the preparatory stages of a construction project and it both prompts and requires the consideration of client objectives in order to achieve this. The contract provides a number of processes and unique structures to prompt and encourage collaborative working and many of these are focussed on the preliminary pre-construction phases. As with any other form, encouragement can only take the matter so far, as it is inevitably a matter for the parties to choose whether to follow both the letter of the processes and the spirit of it too. It is suggested that the more understandable and less complex a contract is the greater the prospect is that its users will choose to follow it.

PPC 2000 sets out objectives or “Partnering Objectives” that are to guide the performance and behaviour of the parties and thereby encourage collaborative working (Clause 4.1).

Clause 4.2 of the form requires the parties to consider the Construction Task Force’s “Rethinking Construction” of 1998 which itself gave impetus to the OGC’s Achieving Excellence in Construction, that are at the heart of this present reviewing exercise. Parties who heed these recommendations will be going to the source of Achieving Excellence in Construction when preparing their project and this contract will assist both their delivery and day to day implementation.

The dependency and interrelationship created by working on a project is supported by the novel structure of PPC 2000, which itself constructs a “Partnering Team”. This is achieved by requiring the team to develop and ultimately sign the same contract which describes and apportions the roles responsibilities in a single set of documents. This Partnering Team is reinforced a “Core Group” which is a structure to assist in the management and resolution of significant, difficult or contentious matters.

The contract provides for working up targets or goals and then enables the parties to agree to encourage their achievement with an incentive arrangement (Clause 13.1). Incentivisation can focus attention on the objectives of the client and can be placed on the Employer too. However, it is axiomatic that incentivisation can only be as

effective as the selection and weighting of the target selected and its consistency with all targets selected.

Evaluation Category 1 Band A

3.2.1.2 Process for Clarifying Deliverables

PPC offers a set of processes that provide a roadmap for clarifying the deliverables required for a construction project. The contract provides a process for both entering into the contract and for the delivery of the project.

PPC recognises the need to manage and coordinate activity of those taking part in a project before the construction works are commenced. One of the ways it seeks to guide this is in the requirement for a programme for this preliminary stage of the project to show when deliverables are required. This Partnering Timetable is created to deal with matters that are to be managed before the start on site and the execution of the Commencement Agreement. The Partnering Programme is to be linked, but distinct (or at least distinguishable), from the construction programme.

The contract contains express provisions for a Project Brief (2.2 (ii)) that is to form one of the Partnering Documents. PPC seeks to encourage the partners to not limit their activities or interest in the project but it nevertheless provides for the performance of specific roles. The terms provide clarification of the role of lead designer, lead supplier, main contractor, sub-contractors in addition to the Partnering Advisor who is to assist in the development of the Partnering Documents.

Two features of the PPC contract are particularly relevant here. Firstly the "Multi Party" structure of the contract documents and secondly the Two Stage structure for procuring specialists.

The multi party format of the agreement does not obviate responsibility for an individual contribution to the design or other Partnering Documents. In this respect the nature and content of the multi party documentations mean that the content is apparent to all of the parties. The contract provides for the standard of the

deliverables and provides for how these Partnering Documents are to be developed (set out under Clause 8). This clause also builds in consultation with and input from the Partnering Team and Specialists (i.e. the Client, the Main Contractor and Subcontractor in non-PPC-parlance).

The contract provides for a multi party structure as a first stage and provides for the procurement of specialists (i.e. subcontracted labour and equipment supply etc) to carry out the works as a second stage of the process (Clause 10). The contract does provide a framework which is to be developed by the Partnering teams for the second stage of this process. The contract sets out the mechanisms that are to be applied in recruiting the specialists and provides that these are to be consistent with the collaborative aspects of the contract. In this respect the SPC 2000 Contract for Specialists was developed to be appropriate to support this purpose. Notwithstanding this it will still be necessary to establish “tender processes” and ensure that relevant procurement regulations are applied. In some instances the significance of the deliverable provided by the specialist may be such that it is appropriate for that person to become one of the Partnering Team Members.

The contract prompts the Partnering Team to conduct value engineering, Value Management and Risk Management exercises (Clause 5.1 (iii)). The structure format and outcome of such exercises is a matter for the parties however the Partnering Advisor would be in a position to support such exercises.

Evaluation Category 1 Band A : Best Practice

3.2.1.3 Process for developing Project Documentation

PPC promotes a high degree of preparation and thoroughness in the development of its project documentation. PPC users should invest the requisite time and energy in this planning stage and if they do then they increase their prospects of realising a successful project.

The process for the development of the Partnering Documents is supported by the Partnering Advisor who can assist in resolving differences and how the PPC method is to be applied. As noted above the Partnering Advisor is also key to the production of documentation and will be required for particular stages to proceed

with the project. For example clause (15.1) requires the Partnering Advisor to draw up the commencement agreement.

The contract identifies the roles of the parties and their responsibility for providing documents. It should be noted that the multi party structure together with the invocation that the contractor should be brought into the process in its early stages will, if carried out provide the opportunity for the involvement of the Client and the Contractor and the specialists in the design elements of the project. In this respect the client objectives and the buildability aspects of realising the project can be taken into account.

PPC contains a degree of flexibility to ensure that partners can join its multi party structure during its course and work in a way that is consistent with it. It achieves this by providing a Joining Agreement and back to back Specialist Contract (SPC 2000).

As with other standard forms the build up of the cost information is critical in the PPC forms, not least as it puts in place a two stage tender procurement process. In the case of PPC the costs are built up on an open book which requires the declaration of profit, central overheads, site overheads and much detail to build up a price framework which discloses risk contingencies. Throughout the process of tendering for the specialists the Constructor retains a responsibility to demonstrate best value to the Client.

Evaluation Category 1 B and A: Best Practice

3.2.1.4 Commencement Processes

The Commencement phase of a project under PPC is carefully structured and yet flexible. PPC is the only one of the contracts under review to provide a Commencement Agreement and Pre-Possession Agreement.

The presence of a pre-possession agreement is a pragmatic consideration that reflects the reliance placed on letters of intent in the industry in general. Letters of intent in their various forms can be particularly difficult when developing a project on

a collaborative basis because collaborative contracts can require a great deal of preparation and management in their initial phases. That the PPC Pre-Possession Agreement is coordinated with the main contract and designed to promote its execution is of great value and will encourage good project management.

The programming provisions of the contract will assist in targeting the activities or pre-conditions necessary to get the project started on site. The contents of the Partnering Documents provide the relevant information in the Partnering Timetable, Project Brief, Project Proposals, Price Framework, Consultant Services Schedules and Payment Terms, KPI and Partnering Charter and Partnering Agreement.

Evaluation Category 1 Band A

3.2.2 Part 2: Construction Phase

From start on site to the end of the construction activity and transition to the point that the project is operational

3.2.2.1 Process for Access to Work Sites

Given the external influences on projects, their financial structures and the influence of third party stakeholders the provision for the statement of pre-conditions to start on site (Clauses 14.1 and 14.2) is pragmatic and will retain focus on items that are driving the programme and that are essential to delivering a successful project. It also serves as something of a checklist of activities to be completed.

Clause 18.2 states that the Constructor is responsible for managing all risks associated with contract and the site from the date of the Commencement Agreement until the Completion Date.

The role of the Partnering Advisor in producing a Commencement Agreement and the provision of a standard form in the PPC documentation assists in achieving a clear demarcation between the preparation and delivery phases.

The Pre-possession Agreement is a well thought out method of allowing works to be carried out whilst the documentation for the project is being developed. Providing a document to commence the project which is coordinated with the main contract processes and that prompts the parties to continue with developing the main contract documentation is superior to a stand alone letter of intent.

Evaluation Category 1 Band A

3.2.2.2 Payment Processes Clear, Fair and Effective

PPC contains a number of clauses that will have an impact upon the sums of money that may be due to or from the members of the Partnering team at any given time and there is considerable scope for change in this as the project proceeds.

Although the PPC payment structure has a large number of variables it is consistent with the ethos that each project is to become something of a business in its own right. This translates the cost consultant from being limited to quantity surveying and expands the role to that akin to the “Financial Director” of the whole endeavour. However, there is some complexity to be addressed in the two stage pricing methods that PPC puts in place.

As with most methods of settling “maximum” prices there is a method to address the consequences of changes and unforeseen events. The members of the Partnering Team are encouraged to propose changes to achieve value and achieve savings. Similarly the parties may have been mobilised early under a Pre-Possession Agreement and may be financially incentivised to complete early. Further careful attention will be required if the contract has linked performance against Key Performance Indicators to payment. The consequence of this is that the Parties will need to be alive to the skill level required in order to manage the payment and cashflow and the need to provide information on an open book basis with access to financial records (Clause 20.12).

Evaluation Category 2 Band A

3.2.2.3 Change Processes; Consider Time, Money and Deliverables

As a procurement method promoting a particular culture this contract enables and indeed encourages the parties to propose change on the one hand and track its consequences fairly on the other. Central to this appears to be the concept that whilst change is inevitable there should not be an incentive to make it a way to achieve extra profit.

The method is first the build up of prices and identification of contingencies on an open book basis that is supported by access to financial records. Risk is apportioned and events may give rise to further time; however there is a prohibition against achieving additional profit or central office overheads in consequence. This is linked to the creation of an Agreed Maximum Price.

The contract change process aims at achieving an agreed time and cost consequence of a change before that change takes effect or is instructed. However if this is not possible (including for reasons of urgency) then the matter eventually comes down to the opinion of the Client's Representative (Clause 17.4). As noted previously any process that resolves to an opinion can be called into question.

Naturally this is dependant upon the good faith of the parties and the ability of all members of the Partnering Team to apply the processes correctly as well as fairly. However these do have a degree of complexity that needs to be taken into account.

Evaluation Category 1 Band B

3.2.2.4 Process for record keeping and communication

This contract requires the partners to actively participate in the sharing of information and their knowledge of the status of the project at any given time. The contract provides for the "transparent and cooperative exchange of information in all matters relating to the project" (Clause 3.1). The contract contains a prompt to the parties that that they might consider giving access to computer networks and databases. It also provides for the Partnering Documents to state which records are to be kept and that these are to be accessible and available for inspection.

Communications, performance monitoring and management are promoted by the requirement for formal Partnering Team Meetings that are to be run to an agenda. These will normally be chaired by the Client Representative and the decisions are to be reached by consensus and recorded.

In addition to day to day communication the contract provides a process whereby the parties are obliged to give early warnings of matters adversely affecting or threatening the Project or the performance of one of the members of the Partnering Team.

Evaluation Category 1 Band B

3.2.2.5 Programme and Status of Programme and Progress against it

As noted above PPC provides for the tracking of progress information against a Partnering Timetable and a Project Timetable and requires these to be updated and maintained with current information. The former drives the management and organisation of the procurement of the project (Clause 6.2) and the latter focuses on the works required to deliver the project (Clause 6.7).

The contract provides for a series of meetings to be convened. Progress against programme is a matter that might form an item of discussion at any and all of these occasions such as the Progress Meeting, the Partnering Team Meetings or even the Core Group Meetings.

In addition to contemporary control and reporting mechanisms the contract also contains the necessary “boiler plate” to oblige progress to be regular, diligent and in accordance with the Project Timetable.

Evaluation Category 2 Band A

3.2.2.6 Design Development and Tracking Changes

Members of the Partnering Team retain distinct roles and responsibilities. The Role of Lead Designer is identified in the Partnering Terms at Clause 8.1. The contract provides for a Design Team that might include the Constructor or other Partnering Team members. It states the obligation of achieving the objective of best value for the Client which is linked to an obligation to update cost estimates and to take into account any budget (Clause 8.7). Value remains in focus in the provisions of clause 8.7 which provides for a Value Engineering Exercise.

Clause 8 also provides a design development process that is linked to the Partnering Timetable and provides for the coordination of design activity and consultation with specialists.

As is typical with this form the degree of coordination and consultation is a matter for the parties to state in the Partnering Documents and then either apply or develop as the project proceeds. As such the contract is a vehicle enabling or facilitating the process that the parties must express and structure themselves.

Evaluation Category 1 Band A

3.2.2.7 Process for Resolving Differences

When differences arise against a background of open book record keeping and the cooperative exchange of information, the process and disclosure of information can reduce the scope of the difference. This is supplemented by the requirement to give early warnings. The prospects of a difference becoming a dispute can be mitigated by enabling a focus on the specific issues between the parties and how these tie to their objectives. The contract has its own Core Group to resolve matters and if they should they prove difficult the Partnering Advisor can be called upon.

There is also a limited opportunity for a matter of dispute to block progress of the project as there is an obligation to comply with a Purchaser's reasonable instructions. If this is not done (and in spite of objections to the instruction) another

person can be appointed to carry out the instructed works if the Constructor does not comply with the instruction within 5 days.

The statement of “formal” processes in Clause 27 should not overshadow the informal lines of communication and dispute solution processes that are fostered by the creation of a Partnering Team.

Evaluation Category 1 Band B

3.2.2.8 Management and Co-ordination

PPC is a project delivery system that enables the formation of a team to manage that delivery. There are a significant number of processes and programming obligations to be completed and compiled within the delivery of the works. The Partnering Documents and their contents are not regarded as a closed book. They evolve and are developed during the course of a PPC project. For example the Core Group may convene a review of continuous improvement processes aimed at achieving best value (23.4). Similarly during the course of the project the parties may be able to link progress on one project to proposals for another and develop a strategic alliance although this might well require the Partnering Terms to be changed.

There is a risk that the volume of processes provided might be disproportionate to the works being carried out. A plethora of process might lead to a degree of procedural gridlock if the team is not able to retain focus on the objectives of the project. This tends to underline the need for the Partnering Advisor when applying the contract. This experience will come with a price and emphasises the fact that PPC requires third party support and does not stand alone.

The management provisions are dependant on sound information rising up through the supply chain and partnering terms with compatible conditions passing down to the Specialists who are sub-contracted to the Constructor. The contract requires that these Specialist Terms and conditions are to be compatible with the Partnering terms and their management processes and sets out the clauses governing this at some length in Clause 10. For example open book information and early warnings are essential to provide insight into performance and delivery

of the project and may be required to give validity to the data necessary to operate the KPI option (if it is selected). This will be particularly important if those KPI are linked to incentive payments.

Evaluation Category 1 Band B

3.2.3 Part 3: Post Construction Operation

3.2.3.1 Integration into the Property/Asset Portfolio for Delivery of Primary Purpose

The contract demonstrates an appreciation of the whole life of a construction process. This is seen in the provision that the Core Group is to consider proposals that the Partnering Team members may make in relation to the operation of the completed project (clause 21.6). However this is not a particular focus of the contract and it is otherwise a matter for the parties to determine.

Evaluation Category 2 Band B

3.2.3.2 Activity and Works Post Construction Phase corrective, slips, etc.

The contract provides mechanisms for correction of defects and for dealing with issues of non performance – these are generally fairly mechanical save in respect of Clause 23 .6 that provides for a Post-Project Review.

This debrief and wrap-up of performance against KPI would appear to have value if conducted well. Such processes are common and represent good practice (not best practice) irrespective of whether they are mandated under a contract however the specific obligation to attend definitely has value.

Evaluation Category 1 Band B

3.2.3.3 Settlement of Money Due

Closure of the contract and its financial obligations takes the form of the agreement of a “Final Account” that is to be conclusive in respect of the balance due and against the Agreed Maximum Price.

The contract provides a timetable for the resolution of what may essentially be a Final Account negotiation albeit with all the cards on the table due to the open book provision of information. It provides for a swift referral to the dispute resolution hierarchy in the event agreement cannot be reached.

Evaluation Category 1 Band B

3.2.3.4 Dispute Resolution Processes

The PPC form takes a structured approach to the resolution of differences and provides for notice of difference to be given or dispute (27.1) and states a Problem Solving Hierarchy (27.2) which takes into account the possibility for a Core Group Review (27.3). Notwithstanding the hierarchy there is the intent that the dispute be resolved at the lowest “level” feasible and the Partnering Advisor can be consulted to assist in the resolution of such differences.

Evaluation Category 1 Band B

3.3 Summary

Evaluation Model Part		Evaluation Category
Part One: Pre-construction and Procurement Processes	Process that clarifies objectives	Leading Excellence in Construction: Best Practice
	Process for clarifying the deliverable	Leading Excellence in Construction: Best Practice
	Processes for developing project documentation	Leading Excellence in Construction: Best Practice
	Commencement Processes	Leading Excellence in Construction: Best Practice
Part Two: Construction Phase	Process for access to work sites	Leading Excellence in Construction: Best Practice
	Payment processes are they clear, fair and effective	Achieving Excellence in Construction: Compliant
	Change process	Leading Excellence in Construction: Encouraged
	Process for record keeping and communication	Leading Excellence in Construction: Encouraged
	Programming & status of programme & progress against it	Achieving Excellence in Construction: Compliant
	Design development & tracking of design change	Leading Excellence in Construction: Best Practice
	Process for resolving differences	Leading Excellence in Construction: Encouraged
	Management & coordination	Leading Excellence in Construction: Encouraged
Post-construction & Operation	Integration into the property/asset portfolio for delivery of primary purpose	Achieving Excellence in Construction: Silent Compliance
	Activity and works post construction	Leading Excellence in

	phase: corrections, slips etc	Construction: Encouraged
	Settlement of money due	Leading Excellence in Construction: Encouraged
	Dispute resolution processes	Leading Excellence in Construction: Encouraged

Chapter 4

Joint Contract Tribunal

JCT Constructing Excellence Contract

JCT Constructing Excellence

Synopsis of performance against the Criteria

4 JCT Consulting Excellence

4.1 Performance against the Evaluation Criteria: Synopsis

4.1.1 Encouragement of collaborative working

The contract is founded on the basis that the project it is used for is to be a collaborative exercise and it bears a clear statement that collaboration is the “Overriding Principle”. The contract is possessed of the essential features that will enable those disposed to collaborative working to prosper and provide those ill disposed to it few places to escape the reach of this procurement technique. However mere use of the form is not sufficient - those not minded to work collaboratively ought not to use this form.

4.1.2 Encouragement of project processes necessary for successful projects

The contract contains the necessary provisions that enable successful projects in terms of the necessary “boiler plate” to provide for payment and legislative compliance. All other things being equal a project manager will be able to use this contract and the powers provided under it to deliver a successful project.

4.1.3 Encouragement of the achievement of value

The contract provides an opportunity to expose and examine risk and cost of covering risks, in its Risk Allocation Schedule and from the requirement for open book provision of information. In this respect the achievement of value is enabled. This is not a lean contract and it trades speed and efficiency for completeness of information and preparation but leaves it to the parties how this affects the value.

4.1.4 Encouragement of supply chain management

This contract has been designed to be used at any point in the supply chain as a works contract, a supply contract or a professional services contract and its integral Guidance Note addresses this matter.

4.1.5 Encouragement of dispute prevention

If appropriate preparation is carried out then following these processes will clarify where disagreements exist. It provides a number of mechanisms for accommodating common difficulties without the need to invoke a formal dispute resolution process.

4.1.6 Encouragement of early dispute resolution

The contract provides for resolution of disputes at an appropriate moment and whilst it accommodates adjudication provisions, it seeks to obviate this statutory scheme in favour its own processes that seek to reduce the rancour and cost that can be associated with solutions imposed by third parties to ongoing projects.

4.1.7 Provision of processes for dealing with variation control and pricing

The contract provides an advanced method of pre-agreeing the time and cost consequences of change via its Risk Allocation Schedule and reinforces this with a more traditional change clause.

4.1.8 Incentivisation of supply chain performance

The option to develop targets and key performance indicators is provided and the contract seems to be predicated on the basis that most users will make use of this provision.

4.1.9 Encouragement of risk management

The Risk Allocation Schedule and Risk Schedule are provided for the express purpose of risk management and these appear to be realistic and effective, if not cutting edge.

4.1.10 Encouragement of client and supply chain involvement in design development

The contract is flexible on design and requires the parties to determine the design procurement model. The status of the parties in relation to the design are stated and a Lead Designer is to be identified. Structures such as the Project Team should support the designer and members of the supply chain who are not the Lead Supplier are required to render “all reasonable assistance” in the co-ordination of the design and construction activity.

4.1.11 Provisions for performance management

In addition to a communications regime and performance monitoring regime the form makes provision of an option for the development of Key Performance Indicators.

4.1.12 Provisions for risk allocation

The contract provides a number of tools for the management of risk notably the Risk Register and the Risk Allocation Schedule. The distinction between the Risk Register and the Risk Allocation Schedule is that former is for information and management whereas the latter is to determine the consequence of risks maturing and provide a liquidated cost and time in advance.

4.1.13 Clear provisions regarding variation pricing and impact of variations on programme

The contract contains a change process, the provisions are clear, and in principle the time and cost changes associated with change are to be agreed in advance.

It should also be noted that the contract contains two pricing options a Target Cost Option and a Contract Sum Option.

4.1.14 User friendliness of the documentation

In addition the provision of a slim and easily understandable set of terms and conditions the JCT Construction Excellence form is published with an integral guide which educates and explains the principles and workings of the contract concisely and makes the chances of it being used in practice correctly all the greater.

4.2 Evaluation Model

4.2.1 Part One: Pre-Construction & Procurement Processes

Processes and activity to be carried out before the construction works begin including the provision of advice and design services:

4.2.1.1 Process clarifying objectives

The option to develop a specific set of KPI for each project should ensure that the activity of the suppliers should be focussed on the objectives of the purchaser as the indicators should be targeted towards these. Similarly the parties may wish to develop a Project Protocol. However the detail of these structures and their content will need to be developed by the parties.

Evaluation Category 1, Band B.

4.2.1.2 Process for clarifying deliverable

JCT Consulting Excellence requires the parties to consider the deliverables in depth in order to develop the Brief required to form Part 2 of the Contract Particulars.

This contract requires the clarification of roles of the project participants irrespective of their place in the supply chain. There are provisions for the identification of the Lead Supplier, Lead Designer, Principal Contractor and sub-supplier (4.6, 4.7, 4.18.2 and 4.21 respectively). Roles are attributed and powers stated. Clarifying these roles aids in the management of the supply chain. This also extends to the provision of terms and conditions to sub-contractors.

The standard to which the deliverables are to be supplied is stated as a duty of care (4.4/4.5).

A number subsidiary options support the provision of deliverables. For example the division of the works into sections clarifies the order for the provision of the deliverables. Once awarded the parties may use the contract provisions for the clarification of information.

Several key activities will remain to be dealt with by the Purchaser and his professional team on each occasion. For example the tools and process for the selection of a service provider. The procedures for placing works out to tender are not addressed in the contract nor are the procedural requirements placed on public bodies accommodated. In this respect, like the other contracts under review, JCT Consulting Excellence makes no provision for tender processes or assessment criteria that are compatible with PCR 2006.

The pricing structure for the contract and the development of the Risk Allocation Schedule should promote the production of comparable tenders targeted to the Purchaser's requirements. The clarity gained in this respect should enable a purchaser to consider whether he is able to achieve best value and decide whether he wishes to proceed.

Following the JCT CONSULTING EXCELLENCE pre-contract processes will increase the prospect for the delivery of a successful project. A version of the Risk Allocation Model might form part of the information to tenderers in order that it can be costed. This should also take into account terms that are to be applied to sub contracts that form the supply chain.

The respective roles of the project participants are stated at various points to support the contract and clarify roles (4.6, 4.7, 4.18.2 and 4.21). This will enable the participants to be aware of each other obligations in respect of the project as this information is to be shared (3.1) (although some commercial terms may be reserved).

Evaluation Category 1, B and B

4.2.1.3 Processes for developing project documentation

A substantial degree of preparation is required to effectively develop a project using a collaborative form of contract to the point where it is fit to be executed and JCT Consulting Excellence is no exception to this requirement.

The documentation provided by JCT is akin to a “workbook” that is to be completed after the contract and the Guidance Note have been digested.

The Contract Particulars will document the activities and processes that the parties agree to undertake for the specific project. This will require project and role to be specifically evaluated on each occasion that the form is to be used.

In providing the information required in the Contract Particulars the parties will be required to address the critical features of the individual project in terms of price, programme and the deliverables.

A critical document for this contract is the Risk Allocation Schedule included in Part 5 of the Contract Particulars and a project specific version of this document should be completed each time the contract is used. Templates for the project specific information required for the payment clauses are provided.

It is intended that the published terms of the JCT Consulting Excellence contract can be used for the whole of the supply chain. This means that it covers activity that might otherwise be termed main contract works, sub contract works and professional services.

If the form is used for the whole of the supply chain on a particular project then the use of a single form with a common structure and vocabulary can assist in the coordination of activities and because terms will be known time scales will be compatible. It should also aid establishing who is required to do what at any given point. Clause 4.17 of the contract provides this encouragement to use the same form throughout the supply chain. This will be enhanced by the requirement to share information.

The contract requirement for a programme and for the maintenance of a programme is set out and supports good project management.

There is an option to create a flexible Project Team to assist in development of the project and a separate agreement is provided to give definition to its purpose and activities in this role.

In addition the participants may wish to take up the option to develop KPI for the specific project.

Evaluation Category 1, Band A: Best Practice

4.2.1.4 Commencement Processes

The contract contains a selection of contract execution processes and provides for a variety of optional activities to support commencement such as a project kick-off/workshop for project delivery e.g. partnering workshop. There is also the option to develop a Project Protocol (2.6) as a voluntary code of conduct and processes for the establishment of project meetings.

Evaluation Category 2, Band A

4.2.2 Part Two: Construction Phase

From start on site to the end of the construction activity and transition to the point that the project is operational

4.2.2.1 Process for access to work sites

JCT Constructing Excellence defines the access to the site (clause 3.3) placing the obligation on the purchaser to provide access to the site.

The project specific detail is provided in the Contract Particulars and as such is dependant on effective preparation. For example the parties will have to state whether the works are to be divided into sections etc.

Evaluation Category 2, Band A

4.2.2.2 Payment processes are they clear, fair and effective?

The payment terms mark a departure from other forms of contract produced by the JCT and documentation will need to be specifically developed for use with this form of contract in particular and also specifically for each occasion that the contract is used on a project.

Another way of putting this is that documentation developed for use with other JCT Contracts should not be used unless it has been re-drafted or otherwise substantially changed for use with this form of contract. The information required is form specific and job specific.

In this respect it is important to see beyond the JCT brand. This is because both the nature of the contract itself and the activity required to deliver it are different from the other forms available under the same brand.

The contract contains two base cost models, a Target Cost Model and a Contract Price Model. Part 7 of the Contract Particulars provide the template that should be used for the statement of prices for each. Section 7 provides the operative clauses that provide the process to support the agreement.

The Risk Allocation Schedule can have a substantial impact on the sums due from the Purchaser as it can operate as payment schedule setting out the time and cost consequences of certain events maturing (5.3).

There are several further processes that have an impact on the sums payable, notably the optional provision for a bonus on early completion and the option for liquidated damages for delay. Similarly "additional" inspection of covered up works can involve cost. The impetus toward timely payment is also supported by an interest provision.

A distinction should be made between these processes which provide for the payment of sums set out by the parties and the provision of a set of “relief events” under clause 5.7. The instance of relief events can be limited by providing an extensive risk allocation schedule. However, when they occur there will be a degree of uncertainty and reliance on opinion for the determination of the consequences. This is also balanced by the open book information regime.

Accordingly it should be noted that there are many ways for there to be deviation from an initially stated sum whether the JCT CONSULTING EXCELLENCE is entered into as a Contract Sum or a Target Price. This is emphasised pragmatically in the guidance notes where the distinction between the sums stated in a contract and the sum stated in a budget is drawn.

Evaluation Category 1, Band B

4.2.2.3 Change process: Consider Time, Money and Deliverables

JCT Consulting Excellence’s change processes are balanced between the Risk Register provisions of Clause 5.1, the Risk Allocation Schedule of Clause 5.3 and a sweep-up provision in Clause 5.7 that provides for Relief Events.

The Risk Allocation Schedule is to be drawn up in the pre-contract phase of a project and its contents can be “negotiated” before they are agreed. Potential change events should be identified and the consequence set down and phrased in terms of time and cost. In effect events that may come to pass are considered in advance and, as part of the bargain, a liquidated consequence in terms of time and money is set against each and then applied if the event occurs. It should be clear to any potential user that the time and effort applied to this process will substantially influence the extent to which a project using the form will be delivered as a collaborative project.

The contract provides for the Purchaser to give instructions that the Supplier is to comply with (4.13) however these are to be “reasonable”.

Evaluation Category 1 Band A

4.2.2.4 Process for record keeping and communication

The JCT Consulting Excellence makes provision for the giving of notice, information and clarification and addresses the status of access to records. A specific process for giving notice is set down in Clause 1.5.

Clauses 3.1 & 3.2 set down the time for communication in respect of the Purchaser and 4.1 for the Supplier and these are supported by the Contract Particulars. A default period is stated if parties do not state their own time period. Face to face communication is encouraged by clause 4.20 which provides for a progress meeting. If the parties wished they could make provision for electronic communication.

Notification of impending or actual occurrence of Risk Allocation Events (5.4) and Relief Events (5.8) is provided for and the consequences of these are to be stated (5.11). Provisions to request further information are also provided (5.12). There is strong impetus for this information to be provided in a timely manner (2.10).

Access to clear information also supports JCT Consulting Excellence's payment regime. Clauses 7.2 and 7.3 provide for access to original material upon which sums are spent.

Clause 2.10 sets down a requirement for information to be provided in a timely manner. Clause 6.4 places an obligation on the Supplier to record his performance monitoring activity and to make it available to the Purchaser.

Evaluation Category 1 Band A

4.2.2.5 Programming & status of programme & progress against it

Programming is placed centrally within the management process of JCT Consulting Excellence. The programme is a management document for the coordination and management of activity. Progress on site compared to the programme will illustrate the state of the project. Clauses 4.19 and Clause 4.20 set out the responsibilities to provide or support the provision of the programme and the requirement to run or attend Progress Meetings.

An obligation to make progress is contained in Clause 4.3 and the Contract Particulars set out the provisions for developing the programme taking account of such practicalities as the division of the project into Sections.

Evaluation Category 1 Band B

4.2.2.6 Design Development & tracking of design change

In identifying and allocating responsibility to a Lead Designer (4.6) the contract seeks to provide visibility to this role in the supply chain and still be flexible enough to accommodate both traditional "Employer's Team" design and design by a "Contractor's Team". The Contract makes provision for the availability of Design Information under Clause 4.9 and encourages the involvement of supply chain at clause 4.16.

Given the significance of the supply chain to delivery of any project the provision to identify a "Leads Supplier" role is identified separately under clause 4.7.

Evaluation Category 2 Band A

4.2.2.7 Process for resolving differences

The contract seeks to give clarity as to issues where there is a difference of opinion and makes provision for progress meetings (4.20). As a general principle the contract promotes the availability and access of information irrespective of where it is held in the Project team. If used correctly this would tend to encourage good project management based on contemporary and relevant information.

The ability to issue requests for information (3.1, 3.2, 4.1 etc) and the provision of information on an open book basis should support decision making and difference resolution as it will provide a common state of knowledge and information based on the available documents.

As noted above the Supplier is to comply with Purchaser's reasonable instructions (4.14). There are provisions for pricing these if they change the deliverable.

The contract contains a simple encouragement or reminder that the parties should seek the resolution of differences by discussion (11.1) as an alternative to the formal dispute resolution processes that will be available.

Evaluation Category 1 Band B

4.2.2.8 Management and coordination

The contract seeks to provide information at the outset and provide clarity to participants using the form and thus identifies roles together with their associated responsibilities, for example the lead designer (4.6), the lead supplier (4.7). In addition there are the requirements for the provision of details of these obligations to sub-suppliers.

This identification of the roles of other parties at each level in the project team provides clarity in terms of who has to do what and thereby supports good project management. For example it will be clear who is responsible for the production and upkeep of the programme and the management of progress meetings (4.19 and 4.20 respectively).

Provisions of Clause 6 for the measurement of performance are supported by Part 6 of the Contract Particulars. There is an option to develop specific Key Performance Indicators to apply to both parties in the operation of the project and them to monitor performance against these is presented. However no standard KPI for this form of contract are published with the documentation.

Evaluation Category 1 Band B

4.2.3 Part Three: Post-Construction & Operation

4.2.3.1 Integration into the property/asset portfolio for delivery of primary purpose

Whilst the contract provides completion and hand over provisions it will be a matter for the parties to determine how the project is integrated and how performance evaluations are carried out.

Evaluation Category 2 Band B

4.2.3.2 Activity and Works Post Construction Phase: corrections, slips etc.

This contract makes clear and simple provision for a supplier to return to put right items that need rectification (Clause 4.3.2).

Evaluation Category 2 Band B

4.2.3.3 Settlement of money due

The processes for arriving at the final sum are set out. It will be essential for these processes to be operated throughout the whole of the contract period. This is because progress needs to be correlated to the Target Cost/Contract Sum (Clauses 7.11 to 7.15 and 7.23 and 7.24 accordingly). The consequences for failing to service the process during the course of the project are substantially negative.

It should be noted that provision is made for the parties to agree a cap on liability.

Evaluation Category 1 Band B

4.2.3.4 Dispute Resolution Processes

The JCT Consulting Excellence contains several layers of dispute resolution process and in addition to the specific clauses of Section 11 many of the contract processes are directed toward the amicable clarification of matters of difference by

adopting a problem solving approach. In essence if the project has been correctly assembled and correctly managed then difficulties should be resolved within the structure of the contract tools such as the Risk Allocation Schedule. If this is insufficient then the formal dispute resolution processes to back up the parties are present.

Evaluation Category 1 Band B

4.3 Summary

Evaluation Model Part		Evaluation Category
Part One: Pre-construction and Procurement Processes	Process that clarifies objectives	Leading Excellence in Construction: Encouraged
	Process for clarifying the deliverable	Leading Excellence in Construction: Encouraged
	Processes for developing project documentation	Leading Excellence in Construction: Best Practice
	Commencement Processes	Achieving Excellence in Construction: Compliant
Part Two: Construction Phase	Process for access to work sites	Achieving Excellence in Construction: Compliant
	Payment processes are they clear, fair and effective	Leading Excellence in Construction: Encouraged
	Change process	Leading Excellence in Construction: Best Practice
	Process for record keeping and communication	Leading Excellence in Construction: Best Practice
	Programming & status of programme & progress against it	Leading Excellence in Construction: Encouraged
	Design development & tracking of design change	Achieving Excellence in Construction: Compliant
	Process for resolving differences	Leading Excellence in Construction: Encouraged
	Management & coordination	Leading Excellence in Construction: Encouraged
Post-construction & Operation	Integration into the property/asset portfolio for delivery of primary purpose	Achieving Excellence in Construction: Silent Compliance
	Activity and works post construction	Achieving Excellence in

	phase: corrections, slips etc	Construction: Silent Compliance
	Settlement of money due	Leading Excellence in Construction: Encouraged
	Dispute resolution processes	Leading Excellence in Construction: Encouraged

Chapter 5:

5 Chapter 5: The Partnering Contracts Applied: Conclusions on the Products, Practice and Policy

5.1 Overview

If this chapter is read following the preceding four then it will be appreciated that each of the contracts considered does satisfy the Evaluation Criteria. It should also be appreciated that whilst each of the forms manages to achieve each of the criteria, they do not all surpass the criteria to the same extent and that certain forms have some outstanding merits. It might further be considered that the criteria themselves are not of equal weight or merit.

In order to draw together the threads and conclusions that apply across the scope of the review the conclusions and observations have been divided according to the three broad themes that were used in the liaison process with the drafting bodies.

- The first theme is the Product and considers the contracts in terms of what they are intended to do;
- The second theme is Practice and considers how the contracts will be used and applied;
- The final theme is Policy and considers why certain initiatives are followed and how they might be developed.

5.2 The Product

5.2.1 Convergence and Proliferation

The construction market has witnessed a proliferation in the publication of standard form contracts.

There are four essential variables:

1. Authoring/Publishing body: professional body, trade association, representative body, government initiative.
2. Procurement Route or Technique: D&B, management contracting, construction management, partnering, two stage, prime cost;
3. Deliverable: Civils, "Building", maintenance, M&E;
4. Client Type: public, private hands on, hands off, repeat business or one off.

Against this background of variables two trends can be seen. The first is the move towards development of a "brand" with a house style and the second is the widening range of products offered by the brand that maintain that house style.

In effect this means that it is possible to purchase a perfectly reasonable "Design and Build" or "traditional" Form of Contract from several sources.

Attendant to brand development is the risk of the brand obscuring the particular provisions or amendments agreed for a specific project because certain assumptions follow from the brand perception. The adverse consequence might be that the distinction is not appreciated and the positive outcome of a specific process is not gained or it is misapplied.

The competitive tension between the brands has led them to increase the quality of their products. The initial production of a "New Engineering Contract", its subsequent updates and the development of further forms such as PPC 2000 and JCT Constructing Excellence are the fruits of this ongoing competition. The observation is that the competition between the brands does appear to have generated better standard form contracts albeit at the expense of a degree of efficiency and a requirement for a period of adjustment whilst organisations migrate from one brand to another. Many seize this opportunity to implement further positive organisational change

5.2.2 Driving Change

The drafting bodies and the writers of the documents reviewed have provided contracts that seek to drive change into practice on live projects. Each of the contracts considered seeks to influence the behaviour of the parties on a day-to-

day basis and have them take particular actions and to implement management processes. Each could be described as a “management tool” in addition to being a statement of obligations. This is a determined trend in construction contracts whereby the methods by which the respective obligations are to be discharged are proscribed by the terms of the contracts.

The application of such management based contracts needs to be considered in respect of the existing practices, processes and business models by which the parties operate, either as internal financial guidelines or reporting methods. A classic example would be of a mismatch between how a contract stated the work is to be remunerated and an in-house standard or business assumption. The result may be that effort is exerted to overturn the contract in order to achieve a commercial goal rather than the result that flows from the bargain.

A similar difficulty can be introduced if change is not driven to all parts in the supply chain so that competing objectives or incompatible terms and conditions are used. An example (frequently seen in practice) would be where a management process applied at one part of the supply chain is reliant upon the production of information that another is not obliged or inclined to provide. This concern applies throughout the supply chain and applies equally to consultants and subcontractors.

5.2.3 When is a Standard Form Not a Standard Form?

All standard forms require a degree of adaptation in order for them to be applicable to a specific project. The contracts considered in the review each demand a substantial degree of project specific activity to assemble the schedules and documentation required in order to function correctly and deliver a project. There can be a substantial risk of failure if this effort is not invested by the interested parties.

In the course of developing this information the standard form contract will be adapted to the particular requirements of the parties. Each of the drafting bodies provides the accommodation for this although they vary in the way in which they do and the extent to which they provide advice and structure for this in their various guidance notes.

A distinction should be made between necessary adaptation on the one hand and revision or wholesale amendment on the other. The drafting bodies are each aware that their contracts are liable to amendment.

OGC will be aware that some of its stakeholders take its endorsement of NEC as a recommendation and use that form for their projects in direct consequence of this. That would seem to be the endorsement's purpose and its consequence.

It should be similarly recognised that some users substantially amend the endorsed form of contract such that it no longer represents the endorsed standard from which it was derived. The result is the use of a contract that is not that which was endorsed but which is something else. Whilst smart or well advised clients may still deliver successful projects with aberrant contracts, use of an endorsed form that is severely amended tends to undermine the endorsement.

5.2.4 Incentivisation

Each of the contracts considered provides an option to agree a method for incentivising the performance of the various parties. Of course all contracts with a commercial basis contain the incentive provided by the consideration and this is reinforced by an obligation that can be enforced in law. However the contracts reviewed make provision to go beyond this. The provisions are optional and the specific tools tend to be developed on a job by job basis so the extent to which incentivisation and performance management is adapted is a matter for the parties.

Each of the contracts contains an option for the development of Key Performance Indicators (KPI) that can be linked to payment of sums of money. Standard form KPI are not produced by the drafting bodies at this time but a variety of best practice clubs exist to support and advise on developing KPI, maximise the benefit and minimise difficulties of implementing them as a procurement tool.

Each contract contains its own method of incentivising total savings and disincentivising total cost overrun either by supporting cost sharing options or pain/gain share mechanisms.

Together such arrangements can provide both a day to day micro approach to incentivisation and a macro approach in respect of the aggregated targets for the whole of the project.

Incentivisation arrangements are not a panacea. Inevitably skill and caution must be exercised in the use and application of such complex and interrelated tools to a project team. The risks include incentivising incompatible or unintended consequences. This can occur as a result of failing to appreciate the behaviours that an incentive will produce during the different phases of the project delivery cycle or the complexity that they introduce.

In addition it should be appreciated that proportionality should be maintained in a KPI system so that the collection and analysis provides information that is worth knowing and is knowable. Effort should be focussed on useful performance management data that can be analysed efficiently and without an undue amount of time being required.

5.2.5 Shortening the Odds

Construction professionals with experience and intelligence are the best asset that any participant in a construction project can deploy in order to achieve a successful outcome. They will contribute to this successful outcome by knowing what they have to do to deliver a project. They will communicate with each other formally and informally to establish what they have to do.

Each of the contracts considered is essentially understandable and adaptable but unfamiliarity with modern construction procurement tools must be overcome in order to get the most out of them or even to use them correctly. The consequence is the requirement for training of construction professionals that needs to be taken into account each time they are used.

5.3 Practice

5.3.1 Applying the Evaluation Criteria

Providing a contract is one thing; applying the processes that it contains is something else. It is perhaps for this reason that the phrase “*encouragement of*” is found within many of the Evaluation Criteria. The points which seem to be understood within this phrase are that:

1. The terms of a contract and the processes that they put in place or enable the development of, are inert unless they are applied or enforced.
2. Use of the contract as a handbook or guide as to what to do at any given point in the process means that the terms will need to be referred to regularly and applied. Consequently they will need to be simple and accessible.
3. There can be, and frequently will be, a difference between what a contract says is to happen and what does happen. It should also be noted that change, whether within a change process or beyond it, may be necessary for good project management in the achievement of the best value.

5.3.2 Resistance to the Collaborative Approach

Awareness and application of collaborative techniques is increasing. However it is a technique that is not universally applied or even accepted and the prevailing market conditions may make it more difficult to embed change.

The resistance to implementing collaborative techniques are varied and the following list suggests some reasons for suspicion of collaborative working. Whilst some may focus on the point of view of an employer, contractor or consultant most will be evident in their own form at any given point in the supply chain:

- Lack of trust – a belief that someone is taking a position to get the job;
- That as a procurement tool it won't provide what's needed to do a good job;

- That partnering pushes one towards unreasonable compromises;
- Reluctance or inability to do the preparation;
- Fear that it won't enable as good a return as a "normal" project;
- Fear that it is inherently "un-commercial" or unrealistic;
- Fear that initial collaboration will stop if commercial problems arise;
- Concern that it means paying for something that should be provided anyway;
- That applying the terms of the contract and the processes on a day to day basis is "contractual";
- There may be a concern that someone gets the credit for someone else's hard work;
- It is possible to do a job without doing all that preparation.

A number of these reasons can be classed as standard causes of inertia and reasons against any particular change or initiative. The antipathy present in a number of quarters was entrenched long before the present economic circumstances were evident.

A collaborative approach is recognised as a technique to be applied to appropriate circumstances. Implicit within this analysis is that the technique will not be applicable to all circumstances and that it should not be followed where it is not appropriate.

5.3.3 How Resistant to abuse is it?

Construction contracts need to display a certain degree of robustness in the face of unintentional misapplication and deliberate abuse that both Employer and Contractor will apply to them in practice.

For example one may question how a partnering contract will fare if a Contractor or Consultant tried to "buy work" to ensure turnover in a down turn or even to adopt a "bid low and claim high" strategy.

A good case can be made for suggesting that the preparations demanded of the client side in the run up to tendering a partnering contract will give the client's team a great degree of insight and this will make such practices more apparent. Similarly the availability of information on an open book basis should assist here.

However there is a general prejudice that the documentation provided as part of an open book arrangement can be of questionable quality or even dubious accuracy. Anecdotal reports of companies running two sets of books are not new.

Some forms allow protection of commercial data. On the other hand deliberately obscuring data or misrepresenting it is not in the spirit of most of the contracts. It is likely to be in breach of the terms and if taken to extremes may even be fraudulent.

The question in this last instance resolves to "do collaborative methods of contracting facilitate, or incite such bad practice or do they instead disclose and expose is in order that it can be avoided earlier?" In this respect it is suggested that no contract will inherently prevent the determined fraud but that the contracts reviewed would be subject to the general prohibition against a benefits accruing from crime.

5.3.4 Theory and practice

Each of the contracts reviewed seeks to provide the framework within which the parties deliver their projects. Each presents the complete array of what the parties may do and, to a greater or lesser extent, seeks to plot each of the moves that each party might make from a given position. That is to say that the contracts seek to provide the routes to solution of all problems that may arise on a construction project and trammel the parties to a resolution.

Provision of such mechanisms both simplifies matters by forcing the parties to follow a process and adds complexity in the requirement to choose the right process and achieve a procedural compliance that may be disconnected to the problem itself.

Provided that the processes are followed and resourced adequately so that the project “on paper” is linked to the project “on site” then matters tend to rub along reasonably well. However it is most important to apply the collaborative principles at the times when it is most difficult to do so for example when projects are not progressing to plan. At these times compromise of one’s interests for the benefit of the project can be required to address problems that cannot otherwise be resolved. At such time the greater the complexity in the processes demanded the more difficult this is: complexity itself can be a breeding ground for disputes.

Consideration ought to be given to the extent to which the contracts are applied in practice as they are intended to in theory. It would appear that each time a form is used and the particular team for a specific project coalesces, that a degree of adaptation will occur. The strict application of contract process is relaxed as the team finds its way to working together. This is natural, inevitable and to a certain extent necessary for good team working. It happens with all contracts – not just partnering contracts.

The extent to which this adaptation during the team building phase remains within acceptable bounds of deviation from the norm is relevant. If in finding their own way with a standard the parties go far beyond the terms and their intended method of operation it will make using the contract increasingly difficult for them. This is a particular problem with contracts that establish and then limit parties to the use of specific processes for managing their project and any difficulties that arise.

This prompts two conclusions; the first that partnering projects that fail can fail substantially and more completely than would be expected with a traditional form of contract; and, secondly the more complex or abstract the terms or processes in the form of contract the more likely it is to give rise to or even prompt this situation.

5.3.5 Impact at site level

The Evaluation Criteria recognise the need to drive change down the supply chain. To this extent there is a risk that the goal of Achieving Excellence in Construction is seen as a “top down” approach. It is not always clear whether or not changes at the main contract level take effect at the sub-contract level where contracts for supply of labour for construction work are found. That is to say that just because a

partnering contract is adopted by the Employer and the Main Contractor it does not mean that the methods and activity of those carrying out the labour will be organised any differently to how they would with a traditional arrangement. This may have an impact upon the extent to which the Main Contractor can comply with the terms of the partnering contract or pass on information and early warnings.

It seems to make little sense to exclude the providers of brick layers and electricians from the benefits of collaborative working. If a change to the construction processes is the aim then the training that is required to use modern procurement techniques ought to include training of people at this point in the supply chain too.

5.4 Policy

5.4.1 Encouraging Project Management to achieve Goals

As noted above the Evaluation Criteria provided by OGC have been developed as a distillation of the principles for Achieving Excellence in Construction.

One of the prime purposes of Achieving Excellence in Construction is to promote the appreciation that applying better project processes is a way of delivering a better or more certain outcome. The outcome is the delivery of the right product at the expected time and on budget. It might be argued that the thrust such initiatives is in the planning, preparation and process for delivery in order to achieve such outcomes and not because of any inherent value within a particular process or contract form.

Accordingly the goal is not the process but the superior outcome that following the process assists. In short the criteria and Achieving Excellence in Construction can be viewed as a means to an end. This exercise and the endorsement hinges on the concept that applying effective means, will increase the prospect of achieving the end.

It may be possible to establish whether or not this is achieved in practice by carrying out post contract reviews of projects delivered by OGC stakeholders. A

series of “sunset reviews” if coordinated and initiated on a wide enough scale might over time build up empirical information on this key concept and thereby prove or disprove the principle.

During the course of the review the contracts have been analysed to determine how they achieve the criteria for Achieving Excellence in Construction; however the ends have been kept in view by taking account of the fact that the contracts must be applied on real projects rather than considering the matter in the abstract.

5.4.2 The Influence of the Collaborative approach

During the process of analysing each of the contracts in the sample it has been clear that the work of policy shapers such as Sir Michael Latham and Sir John Egan, together with the initiative for Achieving Excellence in Construction have been highly influential in the development of the contract documentation for each. This has had the result that each of the drafting bodies has to a greater or lesser extent sought to identify and align themselves with these broadly synchronous policy initiatives.

Each of the forms analysed has a development history that is interweaved with the development of the Achieving Excellence in Construction policy agenda. It has served as a reference point and guide for each of the contracts developed.

In particular each of the contracts considered seeks to encourage collaborative working and their representatives have been at pains to point this out. This perhaps seems to be the most emblematic of the AEC principles. The drafting bodies each seem to consider the provisions encouraging collaborative working to be part of the essential workings of their contracts.

5.4.3 Extending duties beyond the industry standard

The contracts considered require the parties to apply their skill and provide their services in a way that is distinct from the traditional structures of the construction industry. There is a concern that the creation of responsibilities to communicate or the existence of a duty to warn may be improperly understood. Certainly these

matters may give rise to actionable liabilities in new ways that may not have been presented to the courts before.

Many organisations manage the exposure of their business by insuring their liabilities. The terms of those insurance policies compared to the actions of the parties determine whether or not the liability is insured; and ultimately whether any money to meet the liability will be forthcoming.

There are two points here:

- Will the consultants be insured? To what extent do insurance policies, particularly “standard” insurance policies, of professionals have a suitable profile to cover the liabilities that may arise as a consequence of working in a collaborative environment; and,
- It is frequently a term of an insurance policy that the insurer is to be informed immediately and then the insurer is to manage the conduct of the claim and any response that may be necessary in consequence of it. If this notice is not given the insurance may not be effective and once the insurer is involved it may not focus on the collaborative principles in the consultant’s appointment.

5.4.4 The value of a universal endorsement

It has been suggested during the course of the review that the value of the endorsement would be diminished if it were granted more widely.

Is the purpose of the endorsement to recognise a single product as the pinnacle and promote its use in all circumstances? Or is the purpose of the endorsement to highlight tools that can enable best practice? Is it possible for best practice to be achieved in more than one way? Might an endorsement recognise that a contract had achieved a requisite standard in its constituent elements? It is suggested that the point ultimately depends upon the purpose of the endorsement and what OGC wants to achieve by giving it or maintaining it.

5.4.5 The Endorsement

The OGC endorsed the NEC forms of contract in the following terms:

“OGC advises public sector procurers that the form of contract used has to be selected according to the objectives of the project, aiming to satisfy the Achieving Excellence in Construction (AEC) principles.

This edition of the NEC (NEC3) complies fully with the AEC principles. OGC recommends the use of NEC by public sector construction procurers on their construction projects.”

For this reason during the course of the review it has been assumed that an endorsement in similar terms is being considered by OGC. The reasons for giving the endorsement and the consequences enjoined are not the subject of this report. It has also been assumed during the course of the analysis that the fact that one suite of the contracts reviewed has already received an endorsement does not presuppose that it should retain it.

5.5 Summary of Conclusions

- That each contract reviewed satisfies the Evaluation Criteria and whilst each will require some adaptation to suit the project to be delivered and the bargain, substantial amendment of the contract terms will mean that they are less likely to satisfy achieve the Evaluation Criteria.
- That each contract reviewed would enable parties using them correctly to achieve OGC’s Achieving Excellence in Construction standards from which the Evaluation Criteria are derived.
- That correct selection and application of the options provided by the contracts is key. Certain options must be selected and developed to maximise the degree to which the contracts achieve the Evaluation Criteria.
- That to apply the contracts much skill and effort is to be devoted to

(a) the due study of the terms and conditions

(b) the process of management of the project by all concerned.

This has a consequence in time and cost when viewed on a project by project basis but perhaps less when viewed as part of a programme of several projects. It also means that the difference in the way the contracts are applied by users will be at least as significant as differences in their processes or terms and conditions.

- The mere selection or execution of a particular form cannot assure success of the deliverable, it must be applied correctly and pragmatically.
- That simple understandable contracts and processes have greater prospect of being understood and applied correctly. Accordingly excessive complexity should be discouraged.

Arup **Project Management**

Appendix A

The Liaison Process

OGC Partnering Contract Review

Questions to the Drafting Bodies

12 May 2008

Please consider the following questions and provide a written response with relevant references for each of the contracts under review that your drafting body has published. Please clearly indicate the distinction between the contracts if the answer differs between them.

THE OVERARCHING QUESTION

- To what extent does this contract satisfy the principles of Achieving Excellence in Construction?

THE EVALUATION CRITERIA

Encouragement of collaborative working

Encouragement of project processes necessary for successful projects

Encouragement of the achievement of value

Encouragement of supply chain management

Encouragement of dispute prevention

Encouragement of early dispute resolution

Provision of processes for dealing with variation control and pricing

Incentivisation of supply chain performance

Encouragement of risk management

Encouragement of client and supply chain involvement in design development

Provisions for performance management

Provisions for risk allocation

- Sector of industry
 - Proportionality in terms maximum and minimum price and complexity and optimal size?
 - Procurement model selected
7. How does the contract ensure/enable consistency of terms and processes at all points in the supply chain?
 8. How is best value delivered to a client when supply chain profits and overheads are defined?

POLICY AND BEST PRACTICE

1. The OGC's Achieving Excellence in Construction Guidance was launched in March 1999 to what extent has this influenced the content of the form of contract and what additional sources of good practice data and policy have informed its development?
2. How does the contract interface with the OGC's published Project Integration Process and Gateways? Is any adaptation required to either or both of the Contract or the Gateway Process to accommodate these?
3. When should the contract be amended beyond any "Options" provided and the adaptation with user specific data?
 - How do you distinguish between adaptation and amendment?
4. Can the contract remain a collaborative form if it is amended?
 - Which clauses should remain un-amended or intact for the contract to remain a collaborative form?
5. What processes does the contract contain to consider the sustainability of the construction activity and whole life operation of the asset?
6. What processes does the contract contain to ensure that the whole life value and whole life cost of the asset have been considered in its procurement?

Clear provisions regarding variation pricing and impact of variations on programme

User friendliness of the documentation

PRODUCT RELATED

1. To what extent is the contract a procurement system in addition to a set of terms and conditions?
2. Is any specific training required to appreciate the processes and principles of the contract in advance of using the contract?
3. What do you do to engage with and support those who use the contracts on live projects at all levels in the supply chain and how does this contribute to developing future versions of the contract and training?
4. Do you provide, endorse or recommend any planning and programming/ project management tools or software products for use with the contract?
 - If so; which?
 - If not; why not?
5. Do you publish standard form Key Performance Indicators or Risk Allocation Models?
6. Do you benchmark against other forms of contract?
 - If so which and how frequently is the exercise carried out?

PRACTICE

1. How does the contract assist in assessing the integrity and probity of the persons selected to take part at each point in the supply chain?
2. How and at what stages does the contract provide for the input of client and subcontractors in design development?
3. How does the contract align incentivisation with delivering value throughout the supply chain?
4. How does the contract place key decisions into the open so they can be resolved in a timely manner irrespective of their place in the supply chain?
5. How does the contract ensure the visibility of contingency sums?
6. Are there any circumstances where it is not appropriate to use the contract? Take into account factors such as:
 - Inexperience or inflexibility of parties?

NEC response to document titled 'Questions to Drafting Bodies 12 May 2008'

Introduction

NEC is delighted to offer assistance to Arup in undertaking their independent commission to review various drafting bodies' contracts to determine to what extent the nominated contracts satisfy the principles of Achieving Excellence in Construction (AEC).

As a backdrop, NEC3 contracts are the only contracts that the Office of Government Commerce (OGC) endorses for use by public sector construction procurers on their construction projects.

We are quite confident that the NEC3 documents still satisfy the principles of AEC, particularly as that was the basis of receiving such endorsement from OGC in 2005.

We hope that the above, our forthcoming interview together with the specific answers below, will aid the outcome of this report.

We confirm that these questions have been answered assuming unamended copies of the following standard contracts are being considered:

- NEC3 Engineering and Construction Contract (ECC) –a contract between an Employer and a Contractor for engineering and construction works, anywhere in the world, with any proportion of Contractor-designed works.
- NEC3 Professional Services Contract (PSC) –a contract between an Employer and a Consultant for professional services, anywhere in the world.
- Where we have found it necessary, we have referred to other standard NEC3 contracts as appropriate in the text.

Nigel Shaw, NEC Panel Chairman
For and behalf of NEC
23rd May 2008

PRODUCT RELATED

1. To what extent is the contract a procurement system in addition to a set of terms and conditions?

The ECC and PSC are a set of terms and conditions but are distinctly different to the traditional master and servant relationships of most construction contracts. As for being a procurement system, the ECC and PSC can be used and are used in a multitude of procurement and contract strategies. NEC contracts are suitable for design & build, traditional employer designed works, 2-stage early contractor involvement projects, construction management, management contracting, as a means to procure works and/or services in PFI/PPP (but not the head contract itself), framework agreements, prime contracting, DBFO and so on. We can cite many examples of this if required. The NEC Procurement and Contract Strategies guide is also submitted for consideration of best fit with AEC. That document explains in much greater detail how NEC contracts support the multitude of procurement routes and contract strategies available.

2. Is any specific training required to appreciate the processes and principles of the contract in advance of using the contract?

Definitely, yes. We have found that people have been looking for an alternative way of doing business to the traditional JCT or GC/Works approach. There is very extensive and growing take up of NEC in various sectors and in an increasing number of countries. However, some users worryingly expect NEC to be a panacea for all ills of the construction industry. It is not. NEC is essentially a set of processes (with supporting guidance notes and flow charts) based on sound, common sense, project management principles and procedures. We are all in the process of re-educating the construction industry to work together as one. This takes time, and NEC contracts are but one part of that learning process. As with any contract, mistakes can be made if time is not spent understanding the philosophy, content, obligations and responsibility arising. It is not a significant training burden, perhaps one or two days per person at most and the whole principle of NEC contracts is entirely consistent with the PRINCE2 project management system. The NEC organisation provides a wide range of training sessions to support effective use of the contract.

Much of NEC training that we carry out is education in sound project management principles. We consider this to be a most important competence that individuals should pursue, but seems sadly not high up on the agenda with so many other contracts.

3. What do you do to engage with and support those who use the contracts on live projects at all levels in the supply chain and how does this contribute to developing future versions of the contract and training?

There are many examples of our interactions with users.

- **NEC Users' Group:** A member based organisation at the heart of NEC, now has around 500 member organisations around the world. Further information on this can be found at www.neccontract.com. Though others have followed our lead on this, we feel the strength of numbers and diversity of member organisations, willingness to interact and services available to them is unique, and emphasises the connection with users which other contracts cannot match.
- **Helpline:** The NEC Users' Group has a helpline facility. This is a manned technical helpline answering questions from users from basic to advanced. It is a frequently used service, commonly via email but also by phone too. We will also answer questions free of charge for any query by any NEC user wherever they reside for a duration up to 2 hours in duration. Our turnaround time for these questions is targeted at 24 hours.
- **Consultancy:** We do not try to compete with traditional consultancy services advising clients on NEC matters, but solely concentrate on NEC consultancy which includes helping the understanding of unamended NEC contracts and reviewing NEC users' tender documents. We review many draft tender documents in all parts of the supply chain for a basic compliance test with NEC requirements.
- **Newsletter:** We produce an NEC Newsletter (4 or so editions per annum) and a regular eNews (8 or so editions per year). We intend through these mediums to share best practice, FAQs etc throughout the entire supply chain.
- **Annual Seminar:** We hold an NEC Users' Group Annual Seminar, usually in London, with the number of delegates usually around 200 – 300: this is also broadcast via the web.
- **Users' Group Workshops and Roadshows:** We hold approximately 5 or 6 such Workshops per annum at various locations throughout the UK. We are currently in the middle of our latest sessions, concentrating on practical preparation of ECC tender documents and practical administration thereafter. We hold Roadshows, or this year NEC Modular Workshops, for non Users' Group members and find the demand for

these very encouraging. There is definitely a determination to improve NEC abilities/knowledge/competence at various levels of the supply chain. We will and do willingly speak at numerous conferences addressing many different aspects of NEC issues and probably are represented at 10-15 conferences per annum.

- NEC3 published in 2005 came as a result as a detailed review of the 10 years experience and use of NEC2 contracts, including feedback from the NEC Users' Group. In terms of future versions of the contract, we actively capture problems/ideas with and from users and other commentators and report these back to the NEC Panel. This has kick started initiatives such as producing an NEC 3 Supply Contract, writing skeleton Works Information and so on. If the need for changes in any documents is identified we deal with it promptly as an addendum. Ideas for improvement are debated at our frequent NEC Panel meetings.
- Training: In terms of training, we entirely depend upon the interactions of the users with the NEC products and our training is designed around needs expressed by users. For details of our extensive training programme see www.neccontract.com. Feedback from each participant is sought and acted upon. As part of our continuous improvement programme the content and structure of the training courses are reviewed from time to time by our tutors. Of course, we do not seek nor do we have an exclusivity arrangement in respect of NEC training. There are many other providers of such.

4. Do you provide, endorse or recommend any planning and programming/ project management tools or software products for use with the contract?
- If so; which?
 - If not; why not?

Software products for use with the contract: We do not wish to control or dictate the market place. We are currently engaging with several independent organisations who have developed project management tools and software products for use with our contracts. We act as a catalyst to encourage use of our products and are keen for organisations to produce tools to allow software solutions to be used in managing NEC contracts. The fact that organisations have spent very significant amounts of money developing such tools is testimony to the NEC product that we have and we absolutely do not wish to stifle such innovation. If you want a list of organisations we are liaising with, we are happy to provide this.

Planning and programming tools: NEC contracts put programming at the heart of the contract in a way that is completely unmatched by any other form of contract. There is a very thorough

and onerous obligation on the supplier to provide an up-to-date, realistic programme at all stages of a project. It requires that the programme be linked to the payment provisions, and that method statements and resources be identified for all activities. This by itself forms a valuable planning tool, and is backed up by provisions regarding the use of the programme in managing the contract – for example in assessing compensation events. Most professional planning software available in the market can be used to support the programming and planning requirements of the contract. However a major challenge is convincing industry that programmes are a good thing: there seems still to be great reluctance to “buy” into this philosophy. We have produced what we think is a unique training course specifically devoted to programming under NEC contracts – see www.neccontract.com for more information.

5. Do you publish standard form Key Performance Indicators or Risk Allocation Models?

Key Performance Indicators: The NEC Panel will only publish material if it is an improvement to current practice. We believe there is already in place sufficient industry KPIs produced by the likes of Achieving Excellence and others. It would be waste to produce our own set of KPIs. What we do provide in all of our contracts is the means by which KPIs can be contractually implemented as a tool for improving performance. If a fully integrated project team is the desired model, then secondary Option X12: Partnering can be brought into the contract. This provides for the stating of any KPIs and allows for an associated monetary payment if the stated target is achieved or bettered. These same targets can be driven down the supply chain as applicable. If a more typical bi-party relationship is the desired model, then secondary Option X20: Key Performance Indicators can be incorporated into the contract. Again, this provides for the stating of any KPIs, and in addition to defining how they are used to improve performance they can be used to make a monetary payment if the stated target is achieved or bettered. These same targets can similarly be driven down the supply chain as applicable, the main difference between X12 and X20 is that X12 also creates a core group who partner with each other to achieve the client’s objectives which are set down in the KPIs.

Risk Allocation Model: The ECC and PSC provide flexibility in the allocation of risk at a variety of levels. By selection of main and secondary Options for a particular contract, the allocation of overall financial and performance risk is set by the compiler of the contract. The NEC contracts are designed to allow any range of risk allocation, rather than fixing an allocation as part of the contract choice. They also provide a clear and equitable prescribed starting point for the allocation of particular risks between the two parties. These are embedded in what are called compensation events (clause 60) and Employer’s risks (clause 80). If a stated compensation event or Employer’s risk event occurs, then the Contractor (under ECC) or Consultant (under PSC) is compensated (through the compensation event process) for both the time and cost effects such event has on his Prices and the Completion Date. All other

events are at the Contractor's or Consultant's risk. There is therefore a clear threshold of risk between the parties. Both ECC and PSC provide the flexibility to easily adjust the risk allocation between the parties pre-tender, for example by identifying additional Employer's risks. Both ECC and PSC introduce a process for managing risk post contract by creating a Risk Register which is kept alive through notified early warnings which are a reciprocal obligation from Project Manager/Contractor (ECC) or Employer/Consultant (PSC).

6. Do you benchmark against other forms of contract?

- If so which and how frequently is the exercise carried out?

When NEC contracts were first produced, the intention was not to take the best of each of standard form contract available and mix them all together but to start from a clean sheet and design a contracting system from scratch that represents a modern day way of doing business. The aim of the NEC Panel was (and still is today for any changes, new documents etc) to achieve documents that

- are flexible
- are clear and simple
- act as a stimulus to good management.

The whole basis and emphasis of NEC contracts are a deliberate break from tradition and exist solely to provide a best practice means of buying works, goods or services. The aim is therefore to set the standard for modern day contract drafting and we have seen our ideas impact on other drafting bodies' outputs. Our approach to benchmarking is twofold; we review other contract developments to see how well they are emulating our approaches or identifying new ones, and we review the opinions of NEC users of the comparison between NEC and other contracts. Our preference is to ensure our product meets requirements of users or developing what we feel industry would benefit from. We ensure healthy debate within the NEC Panel and through the NEC Users' Group that ultimately leads to improvements. We will therefore continue to trail blaze – we have found this approach works best for NEC.

PRACTICE

1. How does the contract assist in assessing the integrity and probity of the persons selected to take part at each point in the supply chain?

The contract itself cannot assist in assessing the probity and integrity of the Contractor or Consultant to be appointed under it. That must be established in advance by the Employer. However, the design of the contract can help the procurement specialists in developing their tests. For example, the programme is a true project management tool, rather than a claims tool, and can therefore be fully assessed at tender if wished. As part of a quality/price comparison, the tenderer's approach to the management activities in the contract can be assessed, and tests can be added to validate commercial information such as fee percentages.

The contract requires that a key provision in the NEC contracts – to act in a spirit of mutual trust and co-operation – is applied throughout the supply chain. The appointment of subcontractors has to be accepted by the client's Project Manager before they can be used, and their conditions of contract can be reviewed to ensure they will allow the subcontractor to perform adequately.

2. How and at what stages does the contract provide for the input of client and subcontractors in design development?

Focusing on the ECC contract, the client and subcontractors can input in design development at whatever stage(s) desired. The ECC can and is being used at the earliest opportunity to engage the supply chain to help develop the business case, move on to outline design when (usually) a target is agreed then through to construction/detailed design then commissioning/handover. Subcontractors carrying out design functions have the same obligation to provide design details for acceptance by the client's Project Manager as the Contractor does. Through ECC, the client (called the Employer) can have a completely hands on or a completely hands off approach (or anything in between) at the various stages of project development. The client will specify how he wishes to be involved, and the level of interface between himself and the Contractor and Subcontractors. In terms of 'how', many early contractor involvement projects using ECC also use the OGC Gateway Process. So best practice use of gates through the various stages of a project are supported by the conditions of contract which prior to construction works could either be awarded under ECC or PSC, with the ECC being used for construction works. If desired, through secondary Option X12: Partnering, any key subcontractors can be brought into the core group to partner with other Partners to achieve client objectives.

3. How does the contract align incentivisation with delivering value throughout the supply chain?

Both the ECC and PSC offer up a number of incentive based provisions that the parties can decide upon at tender stage. Incentivisation in terms of time, cost and performance can be made. Focusing on ECC, in terms of cost, main Options C or D are both target cost contracts where the Contractor and Employer are incentivised to work together to beat the target in terms of Contractor's efficiencies – the greater the efficiency then the more likely there will be gainshare between the parties. As noted before, Option X12: Partnering can be used to bring to the top table various key members of the supply chain and provide in turn a basis for incentivising what ever it is that you think will help deliver value – the KPIs (with monetary award if desired) can focus on time, cost and/or performance to suit. If X12 is not to be used, then X20: Key Performance Indicators can provide a similar basis for incentivisation, between individual parties to the contract. Another incentive offered up through secondary Options are X6 Bonus for early Completion (if time was of the essence on a project). So there is a myriad of means by which incentivisation can be achieved. What we have witnessed is Consultants and Contractors openly stating that NEC is their preferred contracting system of choice. Laing O'Rourke use the PSC for buying professional services, with limited change, whether those services are being bought in UK, Dubai or Australia. They say that NEC

- reflects the way they wish to do business
- stops the inherent waste of negotiating terms and conditions with each and every supplier on each and every project, and
- creates a standard way of sensibly buying such services which allows them to deliver value through the supply chain by focusing on the client, the project and its risks, rather than arguing about terms and conditions.

4. How does the contract place key decisions into the open so they can be resolved in a timely manner irrespective of their place in the supply chain?

NEC contracts place great emphasis on risk management and pioneered the early warning process. This is a reciprocal process where (under ECC) the Project Manager and Contractor have a reciprocal obligation to notify early warnings that could (in summary) affect time, cost or performance. The first part of this process is the flagging up of the risk, whoever owns that risk. The second part of the process is the key part, 'what are we going to do with this risk'? The Project Manager enters the early warning matter on the Risk Register; a risk reduction meeting is called (either by Project Manager or Contractor) and they decide if other parties should be present. At the meeting, the focus is on putting the project first and deciding how each matter should be resolved. This is carried out independently of the assessment of any time or cost changes; the emphasis is on what will deliver success for the project. The Project Manager records the actions and updates the Risk Register. This entire process is designed

to tease out at the earliest point any possible problems that could negatively act on the project. Such key decisions are therefore placed in the open, they can be resolved very much in a timely manner and, assuming NEC contracts are driven down the supply chain, the whole process works consistently as one. Even if NEC contracts were not used further down the supply chain then such supply chain members can still attend any risk reduction meetings as applicable.

5. How does the contract ensure the visibility of contingency sums?

No NEC contracts contain any provisions for contingency sums, provisional sums, price cost sums/items or the like. This is quite deliberate policy. If you cannot properly describe at tender stage what it is you want the Contractor to design and/or build (in ECC) what benefit will some arbitrary sum provide? How can the Contractor guess in his programme when or if the sum will be expended, and if so will it be on or off the critical path? Does he have a back up set of resources on standby waiting to execute the contingency sum? NEC's opinion is that such sums achieve nothing but uncertainty, so if you cannot properly describe that which you want, then don't think that a contingency sum will somehow transfer risk to the Contractor. The project risk register will help establish the extent of Employer risk and give all sorts of indication that there are particular aspects of the works that cannot properly defined and generally, the Employer will take the risk of such uncertainties. So, in classic risk management, how can we avoid, reduce or mitigate each such risk. It could be, delay the tender process until resolved, obtain more Site Information, state sensible assumptions in the Works Information and so on. So, the visibility is that there are not any contingency sums!

6. Are there any circumstances where it is not appropriate to use the contract? Take into account factors such as:

- Inexperience or inflexibility of parties?
- Sector of industry
- Proportionality in terms maximum and minimum price and complexity and optimal size?
- Procurement model selected

In our experience the only circumstances that ECC is inappropriate to be used is in the head contract in a PFI/PPP project. It can be and is being used as the contract beneath the head PFI/PPP contract. When the NEC3 Supply Contract is launched, there will be in place contracts for buying goods, works or services. However, the ECC can and has been adapted for the purchase of significant equipment. Such can be bought on one-off projects or a strategic framework type arrangement. NEC short form contracts are available for low risk or straightforward projects, and other NEC forms for others. NEC contracts are drafted on a sector and jurisdictional basis. The contracts are not UK biased nor biased to eg civil

engineering. It is designed for any project (or service in the case of the NEC3 Term Service Contract) and can be used in oil & gas, petrochemical, building or engineering works, anywhere in the world.

Of the factors listed considering AEC likely work scope, the variance of sector, price, complexity, optimal size and procurement model do not offer up scenarios where it is not appropriate to use the contract.

Inexperience of the NEC system should not make use of the contract inappropriate. People familiar with traditional forms, after they have overcome surprise at the format, find it easy to understand the NEC processes. Obviously complete novices to contracting will have problems with any contract, but the plain English approach of NEC encourages understanding and they can readily be helped through training.

Inflexibility of parties can be a problem in any transaction and if, for example, a Contractor has no intention of operating the contract according to the contract provisions, then there is a real problem. This would though be exactly the same problem whichever contract is used, where one party has no intention of actually following the contract. There is of course a need to properly manage the contract, whatever form is used – inexperience is negligence.

7. How does the contract ensure/enable consistency of terms and processes at all points in the supply chain?

NEC contracts have been drafted to deliberately provide a consistent and similar basis of terms and conditions throughout the supply chain. Where a Contractor is appointed under the ECC, he can choose from one of two subcontracts for engaging supply chain members on compatible terms. The NEC3 Engineering and Construction Subcontract (ECS) has been written to be 100% back to back with the ECC. If, however, the subcontract works are low risk and straightforward, then the NEC3 Engineering and Construction Short Subcontract (ECSS) could be used. This provides a basis therefore of engaging different members of the supply chain on essentially similar terms and processes which provides a consistent basis of doing business. The PSC has been designed for use either as a stand alone contract or for a design subcontract. Identical terms have been used for the same activity – only where the activity is different are the provisions of the contract different.

8. How is best value delivered to a client when supply chain profits and overheads are defined?

We are unsure as to how this question fits in with the requirements of AEC but where supply chain profits and overheads are defined (presumably during the tender stage) then this has some benefits such as not having to go through a process of arguing/discussing/negotiating such provisions once the contract is underway. If these are determined only post contract, then assessment of change can be held up pending such agreement. Most NEC contracts have tendered fee percentages agreed as part of the contract. In the main this covers (in ECC) Contractor's profits and head office overheads; one percentage is used for Contractor's own work and another for the work of subcontractors. A similar process can be applied down the supply chain. If a tenderer, however, is selected on the basis of his quality submission and fee percentage (profits and overheads) only, with a view to negotiating through open book approach a price (let's say a target cost) then it is difficult to get and demonstrate Best Value. However, the document compiler can include constraints on the subcontract procurement process (eg minimum number of tenders for packages over a certain value and/or Employer involvement in the selection process).

We are unsure as to the intention of this question, so it is a bit of a struggle to say much more on this.

POLICY AND BEST PRACTICE

1. The OGC's Achieving Excellence in Construction Guidance was launched in March 1999. To what extent has this influenced the content of the form of contract and what additional sources of good practice data and policy have informed its development?

At the NEC Users' Group Annual Seminar in 2004, OGC were invited to deliver a key note speech addressing AEC principles. During the presentation, OGC disclosed they had commissioned an independent report: effectively what is being asked of Arup now. OGC publicly commented that they had determined NEC was by some way the closest match to their principles enshrined in AEC, but there were gaps. The next 6 months or so were spent working on these matters which resulted in changes to the terms of the then draft NEC3 contracts and the wording of the guidance notes. This result in the unique endorsement of NEC3 contracts by OGC for use by public sector clients at the time of the NEC3 launch. The papers and notes on discussions/outcomes can be made available to Arup should this be required.

NEC and OGC signed a Memorandum of Understanding at the time of publication of NEC3 which encapsulated the way in which the parties were to work together after such endorsement so as to ensure the NEC product stayed at the forefront of best practice contracting models and we helped serve the interest of the public interest to the greatest extent possible.

We promised not to stand still but to constantly and consistently invest in improving the NEC product. Some of our continuing activities and sources of good practice data and policy are:

- We have a series of regular meetings internally for the
 - NEC Panel and the
 - NEC Strategy Group.
- For the NEC Users' Group
 - we hold several Users' Group workshops throughout the UK each year which are attended by many public sector clients and their supply chains. This group exists solely to share best practice and
 - we hold an annual NEC Users' Group Seminar.
- We provide a tremendous amount of in-house and public training courses to help users improve their NEC knowledge/competency.
- Responding to requests from the market (and the NEC Users' Group)
 - we have finalised a new contract addition together with guidance notes and flow charts – this is the NEC3 Term Service Short Contract (TSSC) which is

primarily aimed at the procurement of low risk, straightforward general services and

- we are in the process of preparing two other new contracts (with guidance notes/flow charts). These are the NEC3 Supply Contract and the NEC3 Supply Short Contract. Again, copies of the latest draft are available for inspection.
 - We are launching our fair payment initiative/project bank account NEC documentation, in line with OGC's Fair Payment Initiative – copies of this can be made available should you require this.
 - We are working with the pilot projects initiated by OGC trialling Integrated Project Insurance which uses NEC3 contracts as the basis for this.
 - To help get feedback on NEC and to improve the product and service, NEC is also in close contact with organisations such as RICS and NBS.
2. How does the contract interface with the OGC's published Project Integration Process and Gateways? Is any adaptation required to either or both of the Contract or the Gateway Process to accommodate these?

The ECC offers a good fit to both the OGC's published Project Integration Process and Gateways. There is no adaptation required to either of the contract or the Gateway Process.

3. When should the contract be amended beyond any "Options" provided and the adaptation with user specific data?
- How do you distinguish between adaptation and amendment?

One of the key principles for NEC documents is flexibility. All the main NEC contracts are specifically designed such that the document compiler is required to reflect the requirements of the Employer and his desired risk allocation by building up the contract from a number of different main and secondary Options. The choice of those Options then requires the completion of the related specific data. This is illustrated below:

Thanks to this option structure, relatively few amendments should normally be required. NEC generally discourages amendments to its provisions but recognises that some may be needed and provides clarity on how amendments should be formalised.

As an example, a standard form can only (and must) include a 'starting point' for the allocation of particular project risks. It is quite normal for the Employer to consider modifying this allocation for a particular project. A strong feature of the NEC contracts is that all risks that are not to be priced by the tenderer are assessed in the same way as 'compensation

events'. Hence the modifications required to change the risk allocation are generally straight forward.

OGC amendments: The NEC worked closely with the OGC to develop a very limited set of additional clauses for use for UK public procurement. These cover issues such as confidentiality and security and are freely available on websites of both OGC and NEC.

The structure of the NEC is also specifically designed to make it as applicable as possible outside the UK. The contracts include very minor jurisdiction-specific Options to cover particular aspects of UK law (the Housing Grants Construction and Regulation Act and the Contracts (Rights of Third Parties) Act). When used outside the UK, we have found that minor modifications may be needed to eg payment timing and dispute resolution provisions.

Adaption and amendment: The contract can be amended and/or clauses can be added via secondary Option Z – additional conditions of contract.

The structure of the NEC helps to ensure users are made aware of the specific risks selected for the contract, and by the use of “Z” clauses, any amendments or additions to the standard contract terms are highlighted.

4. Can the contract remain a collaborative form if it is amended?
 - Which clauses should remain un-amended or intact for the contract to remain a collaborative form?

NEC contracts are inherently collaborative in nature. If substantial amendment is made then the collaborative nature could be affected. If ECC clause 10.1 (mutual trust and co-operation) were removed, it would give a very early signal that the contract would not be operated in a collaborative way. If other key provisions such as early warning (clause 16), the programme (clause 31) and compensation events (clause 60) were significantly amended from their basis, then it could well be argued the potential benefits might well be lost. You can still have a lump sum collaborative form of contract but the key collaborative processes must remain intact.

5. What processes does the contract contain to consider the sustainability of the construction activity and whole life operation of the asset?

NEC3 contracts do not include specific 'sustainability' requirements in the conditions themselves. The view is that sustainability objectives and specifications are primarily technical

and will vary substantially depending on the technology being provided. Any words in the body of the NEC3 terms and conditions would have to be so generic as to have little practical effect. Thus they are not the remit of the standard contract form but should properly be included in the brief/Scope the supplier is working to. This should be included in the ECC's Works Information or the PSC's Scope. The issue of how to focus on whole life cost and value is considered in question 6 below. The NEC contracts cover the complete spectrum of procurement, permitting Employer's to buy concept stage 'advice', construction stage outcomes and operation of the asset.

6. What processes does the contract contain to ensure that the whole life value and whole life cost of the asset have been considered in its procurement?

Firstly, the Client needs to define the balance between first cost and maintenance/replacement costs. This is often heavily influenced by available budgets; whilst a short term view is not necessarily wise, it is often taken as an expedience. The Client will then set out in the Works Information the extent to which whole life costs have to be considered in any element of design by the Contractor.

If using 2-stage tenders or early contractor involvement then part of the deliverables include (in the Works Information) undertaking whole life cost/whole life value studies to ensure compliance with the business case.

One direct mechanism within the ECC that can be used to ensure that whole life value promised at the stage of contract award is the use of secondary Option X17, low performance damages. The contract can be set up to include tests to demonstrate whether the performance levels that have been guaranteed by the Contractor and included in the contract.

For example, if a certain level of power consumption has been guaranteed then the contract should include tests to demonstrate the actual power consumption. The low performance damages would in this case be set to compensate the Employer for any under-performance of the assets in the tests. The value itself can be set as the net present value of the additional costs that will be incurred by the Employer over the design life of the asset.

The tender evaluation mechanism should include not only the capital cost (total of the Prices in ECC language) but also the cost effect on the Employer of the performance levels guaranteed by the tenderer. How this will be done would be set out in the instructions to tenderers, and may be through a financial adjustment applied to the tender total or an assessment of the value of any binding promises made at tender through a quality assessment.

In this way the contract and the procurement process can be used to ensure whole life value and cost issues are properly considered.

There are in fact several other ways NEC users can incentivise the achievement of best whole life value/cost. For example secondary Option X20 can be used to provide for positive incentives if high performance outcomes are achieved. Also if there are a number of contracts contributing to a project, the risk of sub-optimisation arising from suppliers working to their own agenda can be removed by using the partnering Option X20 to provide common incentives if key client objectives are achieved or surpassed.

OGC Partnering Contract Review Questions to the Drafting Bodies

INTRODUCTION

We are pleased to respond, as authors of PPC2000 ACA Standard Form of Contract for Project Partnering, writing on behalf of the Association of Consultant Architects as publishers of PPC2000.

THE OVERARCHING QUESTION

- **To what extent does this contract satisfy the principles of Achieving Excellence in Construction?**

PPC2000 creates a two stage partnering contractual structure and approach which integrate partnering procurement with partnered project management. It provides significant benefits to public sector clients in a way that is consistent with the principles of Achieving Excellence in Construction. We have responded to each of the specific questions that you have raised and look forward to meeting with you for further discussions.

THE EVALUATION CRITERIA

- **Encouragement of collaborative working**

PPC2000 encourages collaborative working by the following means:

- a Creation of a multi-party structure on the premise that if the parties are willing to work as a team they should contract as a team so as to ensure that information is shared, that the basis for appointment is consistent, that everyone is aware of everyone else's obligations and that common objectives are declared from the outset;
- b The early appointment of the main contractor (the **Constructor**) and where appropriate key subcontractors, suppliers and sub-consultants (**Specialists**) so as to establish direct links between all parties who can contribute to design, risk management and other added value;
- c Requirement for the team to work together to achieve a "*transparent and cooperative exchange of information*" and "*to organise and integrate their activities as a collaborative team*" (clause 3.1 refers);
- d Creation of a Core Group – individuals from Partnering Team members who meet regularly to review and stimulate progress. Decisions of the Core Group are to be by Consensus (namely unanimous agreement following reasoned discussion) (clauses 3.3 to 3.6 refer);
- e Establishment of open-book costing and the encouragement of secondments, office sharing arrangements and access to each other's IT systems where appropriate (clause 3.10 refers);

- f Recognition of the importance of Specialist subcontractors, suppliers and sub-consultants through their potential inclusion as Partnering Team members, as a means to encourage further collaborative working throughout the supply chain (clause 10.2 refers);
- g Agreement of deadlines governing the interface between Partnering Team members, as set out in the Partnering Timetable during the preconstruction phase and Project Timetable during the construction phase (clause 6 refers), on the basis that for true collaboration the parties need to be able to rely not only on who will do what, but also on when it will be done.

- **Encouragement of project processes necessary for successful projects**

PPC2000 is expressly designed as a "process" contract governing the preconstruction phase as well as the construction phase of a project. During the preconstruction phase (governed by the "Project Partnering Agreement"), the Partnering Team agree to a series of project processes whereby they develop information to the maximum extent before committing to the construction phase of the project by signature of the "Commencement Agreement".

Specific project processes set out in PPC2000 as a medium to achieve a successful project are governed by deadlines and interfaces as set out in the Partnering Terms and in the Partnering Timetable and Project Timetable, and include:

- a Design development in a series of agreed stages, encouraging maximum input from the Constructor and relevant specialist subcontractors/suppliers during the preconstruction phase of the project (clause 8);
- b Build up of the remainder of the supply chain through submission of business cases and responses to Specialist supply chain tenders run by the Constructor, and monitored by the Client Representative (as project manager) and the remainder of the Partnering Team (clause 10 refers);
- c Build up of prices on an Open-book basis (as defined in Appendix 1) establishing separate Profit, Central Office Overheads and Site Overheads of the Constructor and net costs of all other works, services and supplies so as to facilitate the search for joint savings by the Core Group (clause 12 refers);
- d Option for authorisation of early activities such as mobilisation and long lead in items by means of a controlled system under a form of Pre-Possession Agreement that ensures the relevant works and supplies are governed by all of the terms of PPC2000, and with a clear understanding as to scope, price and duration. This avoids ambiguity often created by a "letter of intent" in similar circumstances (clauses 13.3 and 13.4 and the form of Pre-Possession Agreement refer);

- e Satisfaction of a series of preconditions to start on site and confirmation from all Partnering Team members by signature of the Commencement Agreement that to the best of their knowledge the project is ready to start on site (clause 14 and the form of Commencement Agreement refer);
- f Completion of any outstanding design, procurement and pricing exercises as appropriate during the construction phase of the project (for example, for the purpose of firming up provisional sums) (clause 8.6 refers);
- g Provision for pre-agreement of variations as referred to below (clause 17 refers);
- h Provision for early agreement of claims for additional time and money as referred to below (clause 18 refers).

- **Encouragement of the achievement of value**

By separate agreement of the Constructor's Profit, Central Office Overheads and Site Overheads at the beginning of the preconstruction phase, PPC2000 establishes from the outset a common interest between the Client and the Constructor in searching for value that is of benefit to the project without compromising the Client's or the Constructor's reasonable commercial expectations.

In addition, specific examples of how PPC2000 encourages the achievement of value are:

- a PPC2000 encourages the agreement of fixed Profit, Central Office Overheads and Site Overheads rather than percentages, so as to ensure that the Constructor does not have a commercial benefit automatically deriving from cost or time overruns (clause 12.4 refers).
- b PPC2000 provides incentives for the Partnering Team members to seek shared savings and other added value, with proposals submitted for approval by the Client on the recommendation of the Core Group (clause 13.2 refers).
- c PPC2000 provides for additional incentives linking payment to the achievement of KPIs, with a recommendation that such KPIs should include reduced capital cost and whole life costs, reduced design/supply/construction time, reduced defects and zero defects, reduced accidents, increased predictability, increased productivity, improved quality and improved sustainability (clauses 4.2 and 13.5 refer).
- d The Core Group are tasked with investigating the potential for cost savings and for added value in the design, supply, construction and operation of the project and to make recommendations to the Client (clause 12.10 refers).

- **Encouragement of supply chain management**

PPC2000 as a two stage contract provides for transparency in the engagement of all members of the supply chain, and encourages supply chain management in the following ways:

- a The Constructor is appointed early in the preconstruction phase and there is provision for its management as necessary by the Client Representative (as project manager) (clause 5 refers) who has authority to issue instructions, to consider objections raised by the Constructor, and to require compliance with those instructions subject to any valid objection (clauses 5.1 to 5.5 refer).
- b The authority of the Client Representative extends to all Consultants appointed by the Client.
- c The Constructor has authority and responsibility for managing its Specialist subcontractors, suppliers and sub-consultants who are appointed under forms of Specialist Contract approved in advance (for which purpose, there is the complementary SPC2000 form of Specialist Contract for Project Partnering).
- d The appointment of Specialist subcontractors, suppliers and sub-consultants is finalised during the preconstruction phase on a joint basis, led by the Constructor but with Client and Consultant participation. Protections for Specialists are enshrined in the following provisions:
 - The new Project Bank Account provisions, introduced as an option with effect from the end of May 2008
 - An express requirement that the Constructor pays all Specialists in accordance with agreed provisions (clause 20.11 refers)
 - Provision that failure to pay Specialist Partnering Team members or other breach of Specialist Contracts will constitute breach on the part of the Constructor (clause 26.13 refers).

By this means, PPC2000 balances clear lines of authority as regards management of all supply chain members with provisions that protect their reasonable commercial interests.

- e PPC2000 also requires that the Constructor should establish relationships with Specialist subcontractors, suppliers and sub-consultants that are Open-book to the maximum achievable extent, and that they should establish wherever possible partnering relationships that are complementary to those described in the Partnering Contract (clause 10.1 refers). The prior approval of Specialist Contracts and of documentation issued for the purpose of Specialist selection reinforce the Client's commitment to ensuring a

fully integrated supply chain selected and appointed on an appropriate basis (clauses 10.7 and 10.8 refer).

- **Encouragement of dispute prevention**

The majority of disputes derive from issues that could be best resolved through proper planning and preparation during the preconstruction phase of the project, for example inadequacies in the Client brief, errors or incompleteness of Consultant designs, over-optimistic programming, inadequate site preparation and misunderstandings as to risk management/risk allocation. These are all difficult to address within the confines of a single stage tender process, but can be examined in a sober and collaborative manner during the preconstruction phase established under PPC2000. It is for this reason that, to the best of our knowledge, scarcely any disputes have been referred for formal adjudication, arbitration or litigation under PPC2000 during the eight years since its publication.

As to the contractual means for dispute prevention additional to the preconstruction phase preparatory and planning processes, PPC2000 provides for:

- a Early warning under clause 2.5 to bring to the attention of the Core Group any error, omission or discrepancy between Partnering Documents identified by any Partnering Team member;
- b Early warning under clause 3.7 requiring Partnering Team members to notify any matter adversely or threatening the Project or their own performance together with proposals for avoiding or remedying the relevant matter. By this means, there is every opportunity for an issue to be resolved before it becomes a difference or dispute;
- c Reference to the Core Group who are required to meet and seek an appropriate solution to matters notified by way of early warning;
- d Support where required of the Partnering Adviser whose stated functions include solving of problems and avoidance of disputes (clause 5.6(vi) refers).

- **Encouragement of early dispute resolution**

PPC2000 provides for:

- a Notification of any difference or dispute between Partnering Team members copied to the Client Representative as soon as a Partnering Team member is aware of such difference or dispute (clause 27.1 refers);
- b Application of a Problem-Solving Hierarchy identifying individuals within each Partnering Team member at increasing levels of seniority, with the requirement that any notified difference or dispute goes through the individuals at the increasing levels of seniority within specific time limits, expressing their views and proposing solutions with a view to resolving a notified difference or dispute (clause 27.2 refers);

- c If the dispute or difference is not resolved by means of the Problem-Solving Hierarchy, there is provision for it to be referred to the Core Group who are required to attend and make constructive proposals in seeking to achieve an agreed solution. They are to meet at no more than 10 working days notice (clause 27.3 refers);
- d Failing Core Group resolution, there is provision for the difference or dispute to be referred to conciliation (in accordance with the specified ACA procedure) or to mediation or to any other agreed form of alternative dispute resolution recommended by the appointed Partnering Adviser (clauses 27.4 refers).

All of the above procedures are without prejudice to the parties' statutory right of adjudication. However, our experience over the last eight years (both direct and anecdotal) is that nearly all disputes and differences arising under PPC2000 have been resolved successfully through the medium of the Core Group and/or structured negotiation.

The role of the Partnering Adviser in this process is, we believe, another significant means of early dispute resolution. This is a party agreed by all Partnering Team members available to them together or individually to provide advice and support and also tasked with providing assistance in resolution of disputes (clauses 5.6(vi) refers).

- **Provision of processes for dealing with variation control and pricing**

PPC2000 invites proposals for variations (**Changes**) to be put forward by any Partnering Team member, as part of the search for improvements and added value (clause 17.1 refers).

- a If such a Change is approved by the Client in principle or if a Change is initiated by the Client, then it is instructed on the basis that there will first be a submission by the Constructor setting out proposals as to the effect of a proposed Change on all amounts payable under the contract and as to its impact on progress and the agreed date for completion (clause 17.2 refers).
- b There is provision for advanced agreement of the Constructor's Change submission, failing which there is provision for interim evaluation by the Client Representative. These steps can be overridden by the instruction of urgent change (clauses 17.4 and 17.5 refer).
- c Accordingly, the presumption in PPC2000 is that the time and cost effect of Changes will be agreed in advance on the basis of full information provided by the Constructor. In addition, there is provision for the effect of any Change on Consultant fees to be specifically in line with the relevant Consultant Payment Terms (clause 17.8 refers).

- **Incentivisation of supply chain performance**

PPC2000 provides for a series of incentives comprising:

- a Shared savings arrangements and added value incentives, applicable to the amount payable to any Partnering Team member (clause 13.2 refers);
- b Links between payment and achievement of targets stated in KPIs (including achievement of the agreed Date for Completion) and applicable to payment of the Constructor and/or to payment of any consultant (clause 13.5 refers);
- c Other incentives appropriate to encourage Partnering Team members to maximum their efforts, as considered and established by the Core Group (clause 13.1 refers).

SPC2000 provides for a series of complementary incentives equivalent to those listed above, so that incentivisation is operated throughout the supply chain.

- **Encouragement of risk management**

- a PPC2000 encourages Risk Management (as defined in Appendix 1) by means of early conditional engagement of the Constructor alongside the Consultants (and key Specialists) during the preconstruction phase of the project.
- b PPC2000 provides that Partnering Team members shall work together and individually during the preconstruction phase through agreed Risk Management exercises to analyse and manage risks in the most effective ways (clause 18.1 refers).
- c In addition, PPC2000 provides that any risk contingencies should be notified by the Constructor, but only incorporated in the price of the Project if and to the extent that they have been approved by the Client after risks have been reviewed in accordance with clause 18.1 with proposals for how such risks can be eliminated, reduced, insured, shared or apportioned as appropriate (clause 12.1 refers).
- d The PPC2000 Guide encourages the use of risk registers among other means of risk management, and recognises that risks will need to crystallise substantially at the point of commencement of the construction phase – so as to allow clarity in pricing and underlying commitments. Flexibility in this respect is allowed for in conclusion of the PPC2000 Commencement Agreement which acknowledges the possibility of risk sharing arrangements, third party consents entitling claims for extension of time, other events entitling claims for extension of time and additional payment, and agreed exceptions to constructor risk on site (Commencement Agreement references to clause 18 refer).

- **Encouragement of client and supply chain involvement in design development**

- a PPC2000, as a two stage system for procurement, is predicated on the view that Constructors and their Specialist subcontractors/suppliers/sub-consultants have significant and valuable contributions to offer to the design process, but need to be engaged at a point in that process when they can influence design without the cost and wasted time of substantial Consultant redesign.
- b PPC2000 provides for the Constructor and Specialists to be involved to the maximum extent in the agreed stages of design development (clause 8.3 refers and note in particular clause 8.3(iv)).
- c PPC2000 also provides expressly for Value Engineering (as defined in Appendix 1) at each stage of design (clause 8.8 refers).
- d There is emphasis on the design contributions available from Specialists, in terms of the basis for establishing Constructor/Specialist relationships so as to secure not only the best available specialist warranties and support, but also the maximum potential for Specialist innovation and other contributions to the Project (clause 10.1(iii) refers).

- **Provisions for performance management**

- a PPC2000 includes firstly provision for performance measurement through the use of agreed KPIs, which form part of the Partnering Documents (clause 2.2(viii) refers).
- b The performance measures established by the KPIs are to be kept under review by the Core Group as a means of seeking continuous improvement throughout the life of the project (clauses 23.1 to 23.5 refer).
- c In addition, there is provision for post project completion review (clause 23.6 refers).
- d In addition to the measures of performance and the review processes established by the use of KPIs and agreed targets, PPC2000 provides for performance to be managed through the authority of the Client Representative by means of instructions (clauses 5.4 to 5.6 refer).
- e PPC2000 also includes provision for the Client to terminate its relationship with all Partnering Team members in the event that the preconditions to commencement of the construction phase are not achieved in accordance with clause 14.1 (clause 26.1 refers).
- f In addition, PPC2000 provides for termination of the appointment of any given Partnering Team member in the event of non performance by reason of breach or insolvency (clauses 26.2, 26.3 and 26.4 refer),

but subject (other than in the case of insolvency) to prior Core Group review in order to seek means to remedy the relevant failing and avoid termination.

- **Provisions for risk allocation**

- a Subject to the risk management processes referred to above and the potential for specific risk sharing arrangements to be agreed where appropriate, PPC2000 provides for risk during the construction phase of the project to be managed by the Constructor (clause 18.2).
- b PPC2000 provides an agreed list of grounds for extension of time (as set out in clause 18.3) with particular requirements for notice to be served by the Constructor by way of early warning as a precondition to claiming additional time or money by reason of a Client or Consultant delay or a Client or Consultant breach (clauses 18.3(i) and (xiv) refer).
- c As regards the financial impact of claims for delay or disruption, these are restricted to unavoidable work and expenditure and time-based Site Overheads as regards all listed grounds subject to particular exceptions where delay and disruption are outside the control of both the Client and the Constructor (clauses 18.5 and 18.6 refer).
- d In order to motivate all Partnering Team members to seek to avoid the impact of risks that may give rise to delay and disruption, the Constructor's entitlement, whatever the cause of that delay or disruption, excludes additional Profit or Central Office Overheads or any loss of profit on other projects (clause 18.6(ii) refers).
- e The impact of delay or disruption on Consultants is subject to specific provisions in the relevant consultant payment terms (clause 18.7 refers).
- f Risk as to the extent of the site and its boundaries and as to the nature of the environment surrounding the site rests with the Constructor (clause 18.8 refers).
- g Risk in respect of the state and condition of soil and rock strata and any structures and environment comprising the site rests with the Constructor unless otherwise agreed (clause 18.9 refers).
- h Risk in relation to the performance of Specialist subcontractors, suppliers and sub-consultants rests with the Constructor, except as regards Specialists appointed direct by the Client (clause 18.10 refers).

- **Clear provisions regarding variation pricing and impact of variations on programme**

As stated above, there is provision in PPC2000 for the advance agreement of both the price and time implications of all Changes (clauses 17.1 to 17.4 refer).

As indicated above, there is a possibility of the Client overriding this procedure in the event of an urgent Change (clause 17.5 refers).

There is also provision for the Constructor to minimise any adverse effect on the time or cost implications of any Change and for other Partnering Team members to assist in achieving this objective within their agreed roles, expertise and responsibilities (clause 17.6 refers).

PPC2000 is user friendly for the following reasons:

- a Clauses are kept relatively brief;
- b Definitions are clearly set out in Appendix 1;
- c Details requiring insertion in the Project Partnering Agreement and in the Commencement Agreement are consistent with corresponding provisions in the Partnering Terms;
- d The Partnering Terms follow a logical sequence, for example as regards the build up of designs, supply chain members and prices (under clauses 8, 10 and 12), as regards the preconditions to commencement on site (under clause 14) and as regards the key provisions in relation to the project on site, its quality of environment and provisions for change and risk management (clauses 15, 16, 17 and 18)
- e Contract administration forms covering instructions (Change and Client Representative), final account, completion, rectification of defects and valuations are available on www.ppc2000.co.uk free of charge. These assist in the management of the contract by the Client Representative and make it user friendly.

- **User friendliness of the documentation**

The PPC2000 Guide includes the following tools for use by Partnering Team members:

- a Ten common pitfalls in respect of PPC2000 in use;
- b Checklists for use when completing the PPC2000 Project Partnering Agreement and Commencement Agreement and also if and when completing any PPC2000 Joining Agreement or Pre-Possession Agreement;
- c Additional checklists for use by the Core Group, the Client Representative and the Partnering Adviser;
- d Lists of PPC2000 timescales (and corresponding timescales under the SPC2000 Specialist Subcontract);
- e PPC2000 flowcharts in relation to the preconstruction phase, the construction phase, design and process development, supply chain

development, price development and also in relation to change and risk management.

PRODUCT RELATED

1. To what extent is the contract a procurement system in addition to a set of terms and conditions?

PPC2000 is a procurement system in addition to a set of terms and conditions insofar as it governs completion of the supply chain through the appointment of remaining Specialist subcontractors, suppliers and sub-consultants (clause 10 refers).

This system is compliant with EU procurement, as the Constructor together with the Consultants (assuming that EU procurement processes have been run in respect of their selection) assume between them full responsibility for all relevant works and services. Completion of the supply chain through second tier procurement exercises is equivalent in procurement terms to the early firming up of provisional sums under any other form of contract, provided of course that it does not involve nomination of a subcontractor, supplier or sub-consultant by the relevant public sector client.

2. Is any specific training required to appreciate the processes and principles of the contract in advance of using the contract?

It is desirable for training to be undertaken by any team members using a new form of contract for the first time. A number of providers of such training are available, from the list of partnering advisers separately accredited by the Association of Consultant Architects, and also from among members of the PPC2000 User Groups across England and Scotland.

Over the eight years of its regular use, PPC2000 has become familiar to many clients, contractors and consultants. The need for training is the best of our knowledge, confined to first use of the contract – and such refresher courses as may be prudent to capture new personnel and new supply chain members.

3. What do you do to engage with and support those who use the contracts on live projects at all levels in the supply chain and how does this contribute to developing future versions of the contract and training?

The Association of Consultant Architects supports and sponsors ten PPC2000 User Groups across England and Scotland. These groups meet on a regular basis and are invited to attend an annual PPC2000 conference where workshops examine current issues effecting the form of contract and its use.

The PPC2000 User Groups and the annual conference are attended by a variety of Clients, Consultants, Contractors and Specialists who contribute actively to the development of the form of contract. For example, members of the steering group that guides the User Groups contributed to a recent publication of a PPC2000 Pricing Guide (copy attached).

In addition, User Group members took part in a recent drafting sub-group which raised enquiries with users of PPC2000 as to amendments and other improvements that they considered appropriate. The outputs from this sub-group will be taken into account in a set of PPC2000 amendments in due course.

In addition, there is a PPC2000 website which publishes case studies, other information and guidance regarding PPC2000 as well as reports from users (www.ppc2000.co.uk).

4. Do you provide, endorse or recommend any planning and programming/project management tools or software products for use with the contract?

- If so; which?
- If not; why not?

The publishers of PPC2000 do not endorse or recommend particular planning and programming/project management tools or software products for use with PPC2000. Decisions in these matters are left to the Partnering Teams on the basis that different projects and working environments demand different approaches and that it is appropriate for the expertise of team members to determine which approach is appropriate.

Neither Trowers & Hamblins nor the ACA as publishers of PPC2000 have been approached with questions or proposals regarding the use of planning and programming/project management tools or software products, and our current understanding is that Partnering Teams are able to identify tools and products appropriate to their needs without this endorsement or recommendation.

5. Do you publish standard form Key Performance Indicators or Risk Allocation Models?

The ACA does not publish standard form key performance indicators or risk allocation models. Constructing Excellence and the Housing Forum have done considerable work in the development and publication of key performance indicators, and we are aware of these key performance indicators being utilised in conjunction with PPC2000.

Risk allocation is set out clearly in PPC2000 and explained in the PPC2000 Guide, subject to agreed flexibility appropriate to the relevant project and site, and the agreed roles, expertise and responsibilities of Partnering Team members.

6. Do you benchmark against other forms of contract?

- If so which and how frequently is the exercise carried out?

The recent discussions undertaken between the publishers of JCT, NEC and PPC2000 through the medium of the Office of Government Commerce have

been a valuable benchmarking exercise, which of course has led to the current review.

Comparisons of PPC2000 with other forms of contract have been undertaken by independent bodies such as the Local Government Task Force, and this provides further guidance for public sector users of those forms of contract.

The RICS publishes reports on contracts in use, which provides indications as to the comparative use of the JCT, NEC and PPC2000 forms.

PRACTICE

1. How does the contract assist in assessing the integrity and probity of the persons selected to take part at each point in the supply chain?

PPC2000 provides for Partnering Team members to employ individuals with the necessary skills, qualifications and experience and provides that their removal or replacement by their employer should be subject to any agreed stated restrictions (clause 7.3 refers).

PPC2000 provides for the Client a right to exclude an individual from the Project on site if he or she disrupts or otherwise adversely affects the Project, subject to prior consultation with the Core Group, and on the basis that the relevant Partnering Team member shall then engage a suitable replacement (clause 7.5 refers).

PPC2000 provides for implementation by the Partnering Teams of appropriate employment and training initiatives as agreed (clause 7.6 refers).

In these respects as in others PPC2000 provides that the Constructor shall establish wherever possible partnering relationships with its Specialist subcontractors, suppliers and sub-consultants that are complementary to those described in the Partnering Contract (clause 10.1(v) refers).

All of the above provisions (including as regards engagement of Sub-Specialists) are reflected in respect of SPC2000 in order that the same standards of integrity and probity are adhered to throughout the supply chain.

2. How and at what stages does the contract provide for the input of client and subcontractors in design development?

PPC2000 provides for Client involvement in design development by means of consultation at each of the design stages set out in clause 8, namely outline designs and alternative solutions, development of designs and detailed designs and in additional designs developed after commencement on site (clauses 8.3 and 8.6 refer). The Client is involved by way of active consultation through the Core Group (and the Client is not entitled to delegate its Core Group membership – clause 5.2 refers) and also has a final right of approval of designs as presented.

As regards subcontractors, there is provision in PPC2000 for the Lead Designer to obtain a maximum input to design development at every stage from relevant

proposed Specialist subcontractors, suppliers and sub-consultants (clause 8.3(iv) refers).

3. How does the contract align incentivisation with delivering value throughout the supply chain?

PPC2000 emphasises the achievement of best value for the Client (see for example references to best value in clause 8.1, clause 10.1(iv) and clause 10.6). Incentivisation provisions refer to cost savings or demonstrable added value, both in the context of shared savings and added value incentives (clause 13.2 refers) and in the context of cost savings and added value to be investigated by the Core Group (clause 12.10 refers).

Equivalent incentivisation provisions as between the Constructor and its Specialist subcontractors, suppliers and sub-consultants appear in SPC2000.

4. How does the contract place key decisions into the open so they can be resolved in a timely manner irrespective of their place in the supply chain?

PPC2000 provides for Early Warning of any discrepancies between Partnering Documents (clause 2.7 refers) and of any matter adversely affecting the Project or a Partnering Team member's performance (clause 3.7 refers), as a means to bring issues out into the open. These matters are then reviewed by the Core Group in a meeting unless they can agree a course of action without the need for a meeting. Because of the requirement for Consensus (ie unanimous agreement after reasoned discussion) of all Core Group members present at a Core Group meeting, a party notifying Early Warning cannot be disadvantaged by a majority decision at such Core Group meeting. Hence, the parties are encouraged to bring matters into the open in the knowledge that they will be considered constructively by the Core Group with a view to achieving the required Consensus as to the appropriate action.

Early Warning provisions under SPC2000 also operate as between the Constructor and its appointed Specialist subcontractors, suppliers and sub-consultants. This offers the opportunity for the Constructor to escalate any Early Warning from a Specialist under SPC2000 for wider consideration by the Core Group under PPC2000, unless of course the relevant Specialist is already a Partnering Team member and a signatory to PPC2000 itself and as a consequence notifies the matter direct to other team members.

5. How does the contract ensure the visibility of contingency sums?

PPC2000 offers the opportunity through early appointment of the Constructor for contingency sums to be declared and reviewed jointly with a view to their elimination or reduction wherever possible. It is a precondition to the inclusion of any risk contingency that it has been approved by the Client after the Constructor and other Partnering Team members have reviewed relevant risks with a view to eliminating, reducing, insuring, sharing or apportioning such risk (clause 12.9 refers).

PPC2000 provides that all aspects of the Agreed Maximum Price should be built up on an Open-book basis through Business Cases and market testing (clauses 10.3 and 10.5 refer) so any additional contingencies will be revealed.

PPC2000 expressly provides for the Constructor's Profit, Central Office Overheads and Site Overheads to be separately agreed in order that these are kept separate from any proposed contingency sum (clause 12.4 refers).

SPC2000 provides for corresponding pricing provisions in order to carry the Open-book system and relevant treatment of risk contingencies down the supply chain.

6. Are there any circumstances where it is not appropriate to use the contract? Take into account factors such as:

- Inexperience or inflexibility of parties?
- Sector of industry
- Proportionality in terms maximum and minimum price and complexity and optimal size?
- Procurement model selected

We would not suggest that PPC2000 is inappropriate by reason of inexperience of the parties, as it is an accessible form of contract that supports the Partnering Team. We have referred elsewhere to the benefit of training on any new form of contract, and we have not heard feedback from User Groups or otherwise as to problems encountered in acquiring familiarity with PPC2000 or for that matter SPC2000 among Clients, Consultants, Constructors or Specialist supply chain members.

As to the inflexibility of parties, clearly if they reject partnering as a means of procurement, it will be difficult for them to obtain the benefits of PPC2000. We would note that PPC2000 requires reasonableness on the part of all Partnering Team members (clause 1.7 refers). Although the processes of design development, procurement, pricing, risk management and finalisation of construction phase programme are all set out clearly in PPC2000, there is no doubt that any two stage process requires some element of reasonableness in the conduct of the parties as regards subsidiary issues not spelled out in the Partnering Timetable or Project Timetable.

We are not aware of any sector of the industry for which PPC2000 would be unsuitable.

We have seen PPC2000 successfully used on projects as small as £500,000 and as large as £500m, and cannot comment definitively as to optimal size or complexity. This issue is one of proportionality in terms of the benefits by way of improved value that can be gained from joint working, particularly during the preconstruction phase of a project. For example, there are bound to be very simple projects (whether or not of low value) where it is possible (at least in

theory) for the Client to acquire its desired result having issued a brief and allowed the Constructor to work on an entirely arms length basis, in which event the joint working and consultative processes set out in PPC2000 will be of relatively little value.

As regards selection of a procurement model, a series of options are set out in the PPC2000 Project Partnering Agreement by reference to clause 22.1 that allow for Consultant design, Constructor design or any combination of the two. Please see our comments elsewhere as regards adaptation of PPC2000 for a construction management procurement model.

7. How does the contract ensure/enable consistency of terms and processes at all points in the supply chain?

PPC2000 establishes complete consistency of terms and processes between the Client, all Consultants, the Constructor and key Specialists through the use of a multi party contract whereby all parties sign the same contract and thus have complete visibility as to the consistency of such terms and processes.

PPC2000 requires that Constructor's relationships with members of its supply chain are complementary to those established in PPC2000 wherever possible (clause 10.1(v) refers).

SPC2000 is an entirely consistent form of contract by which the Constructor can engage its Specialist subcontractors, suppliers and sub-consultants.

8. How is best value delivered to a client when supply chain profits and overheads are defined?

The separate definition of supply chain profit and overheads is a means to ensure that best value is delivered to the Client, as it establishes clear agreement as to the benefits obtained by each member of the supply chain so that:

- a There is no mutual suspicion as to the Client covertly seeking to minimise such Profit and Overheads or the Constructor seeking to maximise them;
- b The Constructor (and Specialists engaged on an equivalent basis) can focus on underlying cost reduction without prejudicing their entitlement to recover profit and overheads, and thereby can establish a common set of goals alongside the Client and its Consultants;
- c The evaluation of Change is made simpler because the separate identification of profit and overheads assists in the analysis of costs resulting from any proposed Change;
- d The analysis and minimisation of costs resulting from any agreed event of delay and disruption are made easier by reason of the exclusion of Profit and Central Office Overheads from any Constructor claim and the specific identification of time-based Site Overheads as a

distinct entitlement in relation to particular grounds for extension of time (clauses 18.5 and 18.6 refer);

- e The Client's budget defines the overall financial limits for the project as from the beginning of the preconstruction phase, with updated cost estimates reconciled with such budget as designs progress (clauses 8.7 and 12.3 refer).

POLICY AND BEST PRACTICE

1. The OGC's Achieving Excellence in Construction Guidance was launched in March 1999 to what extent has this influenced the content of the form of contract and what additional sources of good practice data and policy have informed its development?

PPC2000 is expressly stated to be a partnering contract. It is the first published form of partnering contract and was produced in response to the recommendations of Rethinking Construction, the 1998 report produced under the chairmanship of Sir John Egan. This report is referred to in PPC2000 clause 4.2.

PPC2000 also corresponds to the OGC's Achieving Excellence in Construction guidance, and we have set out below in detail the direct links between relevant AEC guidance and specific PPC2000 provisions.

We would also note that PPC2000 has drawn upon other sources of good practice data including the Construction Industry Council Partnering Task Force Guide to Project Team Partnering, which set out heads of terms that formed the basis for PPC2000.

In the formation of PPC2000, in addition to trialling the draft on a range of live projects through team members and their respective insurers and funders, the authors and publishers also consulted leading industry figures (such as Sir Michael Latham and Richard Saxon of the Building Design Partnership).

The authors, publishers and Steering Group for PPC2000 remain in regular consultation with Constructing Excellence, the Local Government Task Force and the Housing Forum. David Mosey of Trowers & Hamlin remains a member of the Construction Industry Council Partnering Task Force, which has commenced a further round of meetings this year with a view to developing partnering best practice. Leading industry figures such as Sir Michael Latham and Don Ward of Constructing Excellence have contributed to PPC2000 annual User Group conferences.

PPC2000 complies with all of the Achieving Excellence in Construction ("AEC") principles. There are set out below the relationships, processes and values identified by the Office of Government Commerce in its AEC series, together with the corresponding specific provisions of PPC2000.

AEC Construction Projects Pocketbook – Critical Factors for Success

“Leadership and commitment from the project’s Senior Responsible Owner (SRO)”

- PPC2000 provides the means for active Client leadership without detracting from the roles, responsibilities and expertise of other project team members. For example, it provides that the Client must be a member of the Core Group and cannot delegate this function to any external Consultant (eg clause 5.2).

“Involvement of key stakeholders throughout the project”

- PPC2000 creates the project team early in the pre-construction phase of the Project.
- It involves the Constructor and key sub-contractors/suppliers at the earliest opportunity in key planning activities such as design development and joint risk management.
- PPC2000 also provides for the “*maximum practicable involvement*” of “*Interested Parties*”, which can include all stakeholders who are not themselves signatories to the contract (clause 3.9).

“Roles and responsibilities clearly understood by everyone involved in the project, with clear communication lines”

- For a team to function efficiently, its members need to know what each other have agreed to do, and to have access to a joint forum to deal with efficient communication of ideas, obstacles and problems.
- Because PPC2000 is a multi-party contract, it allows all project team members to review each other’s brief and services, as distinct from two-party contracts where the Client is the only contractual common denominator.
- PPC2000 also provides for the creation and operation of a Core Group as the medium for communication of key issues and, unlike any other form of contract, set out its terms of reference in relation to a series of Project processes such as design development, value engineering, risk management and problem-solving.

“An integrated project team consisting of client, designers, constructors and specialist suppliers, with input from facilities managers/operators”

- PPC2000 establishes an integrated project team by means of the Client, Design Consultants, Constructor and key Specialist sub-contractors/suppliers entering into a single form of contract.

- The PPC2000 team operates in accordance with fully integrated programmes during the pre-construction phase and construction phase of the Project.
- The use of PPC2000 provides the basis for creation of a single team governing all phases of the life cycle of a built facility.

“An integrated process in which design, construction, operation and maintenance are considered as a whole”

- PPC2000 governs the pre-construction phase of a project as well as the construction phase. It specifically describes design development, supply chain development, price finalisation and joint risk management processes.
- PPC2000 contemplates agreed arrangements in relation to the ongoing “*Operation*” of the completed Project (clause 21.6).
- Use of PPC2000 enables the project team to integrate design and construction with operation and maintenance.

“Design that takes account of functionality, appropriate build quality and impact on the environment”

- PPC2000 provides for maximum input to design development by the appointed Specialist sub-contractors (clause 8.3(iv)) including during the pre-construction phase of the Project when their input to issues of functionality and build quality can best be obtained.
- PPC2000 provides specifically for key performance indicators and targets in respect of “improved Sustainability” (clause 4.2(ix)).

“Commitment to excellence in health and safety performance”

- PPC2000 provides for compliance with health and safety legislation.
- In addition, it also states a commitment of the Partnering Team members “to achieve the highest possible standards of health and safety” (clause 7.2).

“Procurement and contract strategies that ensure the provision of an integrated project team”

- PPC2000 significantly increases the opportunity for the integration of the Constructor and key Specialist sub-contractors by providing expressly that the Constructor must be a member of the Partnering Team from the outset.

“Risk and value management that involves the entire project team, actively managed throughout the project”

- PPC2000 provides expressly for “*Risk Management*” and “*Value Management*” processes, each defined (Appendix 1) and each subject to the “*Client Representative*” organising and monitoring contributions by other Partnering Team members (clauses 5.1(iii) and 18.1).
- The continuity of these activities is established by programmes through the “*Partnering Timetable*” governing the pre-construction phase of the Project and the “*Project Timetable*” governing the construction phase of the Project (clause 6).

“Award of contract on the basis of best value for money over the whole life of the facility, not lowest tender price”

- PPC2000 facilitates the award of a contract and the development of supply chain relationships on the basis of best value (clause 10).
- Selection of a Constructor to implement PPC2000 allows a Client to make a selection utilising criteria of best value over the whole life of the facility.

“Commitment to continuous improvement”

- PPC2000 provide expressly for targets linked to listed KPIs (eg clause 4.2).
- It also provides for incentives linked to the achievement of agreed KPI targets (eg clause 13.5).
- It provides for measurement of continuous improvement under regular review by the Core Group by reference to the KPIs (eg clause 23).
- It provides the potential benefits of the same Partnering Team implementing further projects subject to their respective performance against the KPIs and subject to agreement of specific terms consistent with current applicable laws and regulations (e.g. PPC2000 clause 24.2).

“Commitment to best practice in sustainability”

- PPC2000 provides specifically for targets to be stated in the KPIs that include “improved Sustainability” (clause 4.2(ix)).

Other AEC Procurement Guides

A number of volumes of the AEC Procurement Guides incorporate additional guidance that is relevant to the choice of contract form and these are identified below.

“Common processes, measurement of performance and continuous improvement to improve quality and eliminate waste” (Page 3, AEC Procurement Guide 03)

- PPC2000 provides for the objectives of Partnering Team members to include “lean production and reduction or elimination of waste” (PPC2000 clause 4.1(iii) and TPC2005 clause 2.1(iv)).
- PPC2000 also includes a specific target and KPI for “improved quality” (clause 4.2(viii)).

“Common processes such as shared IT” (Page 5, AEC Procurement Guide 05)

- PPC2000 provides for Partnering Team members to develop collaborative arrangements that include “office sharing arrangements and access to each other’s computer networks and databases” (clause 3.10).

“Modern commercial arrangements based on target cost or target price with shared pain/gain incentivisation” (Page 5, AEC Procurement Guide 05)

- PPC2000 provides for incentives that include shared savings and added value (clause 13.2) and allows for the development of risk sharing arrangements to be agreed between the Partnering Team members at the point of start on site (clause 18.2).

“Commitment to a contract with an integrated team, not with separate companies” (Page 7, AEC Procurement Guide 05)

- Appointment of an integrated team is a considerable responsibility for the public sector client, not least the establishment of arrangements that minimise the risk of gaps and duplications between the roles and responsibilities of team members. As multi-party contracts, PPC2000 creates direct duties of care between the Constructor/Service Provider and Consultants so that the Client is not the only point of interface between these parties. It also creates a basis on which each team member can see and better understand the roles and responsibilities of other team members.

“Design & Build” and “Prime Contracting” (Page 10, Procurement and Contracting Strategies, AEC Procurement Guide 06)

- PPC2000 provides for a design and build option (clause 22.1, first option page (iv) of the Project Partnering Agreement) with a fitness for purpose variant (clause 22.1, second option page (iv) of the Project Partnering Agreement). Through agreement of ongoing arrangements for “*Operation*” of the completed Project (clause 21.6), it also creates a Prime Contracting Option governing the initial occupation period.

2. How does the contract interface with the OGC's published Project Integration Process and Gateways? Is any adaptation required to either or both of the Contract or the Gateway Process to accommodate these?

PPC2000 interfaces particularly well with the OGC's published Project Integration Process and Gateways as it is the only published form of contract that provides expressly for early contractor involvement at a time when the contractor can contribute to both outline design and detailed design.

PPC2000 aligns with the award of a contract immediately following "Gateway 3: Investment Decision" and prior to "Outline Design" and "Detailed Design".

By means of its pre-construction phase processes, PPC2000 permits the Risk Management and Value Engineering identified at both the Outline Design and Detailed Design stages and includes provision for approval of both Outline Designs (clause 8.3(ii)) and Detailed Designs (clause 8.3(v)) before the Project proceeds to construction.

The provision for award of the contract to the IST ("Integrated Supply Team"), as identified in the Project Procurement Life Cycle: The Integrated Process, mirrors the early contractual engagement under PPC2000 of the Client, the Consultants, the Constructor and the key Specialist sub-contractors/suppliers in a single project team.

3. When should the contract be amended beyond any "Options" provided and the adaptation with user specific data?

- How do you distinguish between adaptation and amendment?

Adaptation of PPC2000 is in our view the means to identify particular choices made by the Client and Partnering Team (for example, the introduction of collateral warranties and particular insurance levels or security requirements). On the other hand, amendments are changes to the terms of PPC2000 itself.

PPC2000 provides for a series of options in the Project Partnering Agreement against clause 22.1 and allows for other agreed amendments to duties of care, warranties and third party rights by reference to clauses 22.1 and 22.4. Accordingly, PPC2000 allows the Client to select an appropriate set of duties of care, warranties and third party rights without requiring an alternative form of contract and without drafting bespoke additional wording.

Clients and Partnering Teams are able to agree Special Terms for insertion in clause 28. In our experience, this does not (and should not) form the basis for substantial amendments to PPC2000, but rather for the insertion of clauses that are in line with the particular standard requirements of certain public sector clients (eg clauses dealing with Freedom of Information, Data Protection, Equal Opportunities, audit, etc).

We are not aware of any requirement for amendments of PPC2000 for creation of an effective and successful project partnering contract. The

Project Partnering Agreement provides for the possibility of amendment of the design development process (clauses 8.3 and 8.6) and the introduction of amended duties of care, warranties and third party rights (clauses 22.1 and 22.4) to reflect project-specific requirements.

The only instance where a bespoke version of PPC2000 has been produced has been where the project team wished to create a "construction management" approach to procurement whereby separate trade contractors were linked in a multi party arrangement with the Client Representative acting effectively as construction manager. This approach has been utilised by three public sector (or quasi public sector) clients of which we are aware. As it is not one of the OGC recommended procurement models, we have not considered publication of an alternative version of PPC2000 for this purpose.

4. Can the contract remain a collaborative form if it is amended?

- Which clauses should remain un-amended or intact for the contract to remain a collaborative form?

Firstly, we would emphasise the fact that PPC2000 in our experience is almost never subject to substantive amendments. Aside from PPC2000 projects on which we have advised ourselves, we have had numerous occasions to review PPC2000 contracts prepared concluded by third parties – and in almost all cases, the clauses and structure remain intact. This may owe something to the fact that as a multi party contract, all team members accept that some measure of pragmatism and compromise is necessary deliberations, and that there is no purpose in seeking to pursue amendments for the benefit of one party only. This distinction is significant as we are aware of the difficulties in the negotiation of a series of two party contracts where the parties are not aware of each other's contract terms and are inclined to defend a position on the assumption that otherwise they will be at a disadvantage compared to other parties.

In the light of the above, it is difficult to distinguish individual clauses of PPC2000 that could be deleted while retaining a collaborative form. The contract works as a whole, subject to specific options highlighted in the Project Partnering Agreement, and we would not recommend that clients be invited to pick and choose the provisions that they adopt.

5. What processes does the contract contain to consider the sustainability of the construction activity and whole life operation of the asset?

PPC2000 recommends a specific KPI for improved Sustainability (clause 4.2(ix)) and has included this KPI since its original publication in 2000.

In addition, PPC2000 contains provision for the Core Group to consider any proposals put forward by the Constructor, Consultants and Specialist team members for the ongoing Operation (ie use, occupation, operation, maintenance, repair, alteration and demolition) of the project after its completion.

Thirdly, PPC2000 is published with the complementary TPC2005 form of Term Partnering Contract which can govern all types of term arrangements (repairs/ maintenance/facilities management/other relevant works and services and supplies) over the lifetime of completed project. TPC2005 contains its own improvement processes, targets and KPIs which are linked to incentive systems and variation of its term, with an accompanying Partnering Timetable and Risk Register ensuring that target dates are recognised and adhered to.

6. What processes does the contract contain to ensure that the whole life value and whole life cost of the asset have been considered in its procurement?

The two stage structure of PPC2000 is unique in creating an opportunity for the entire Partnering Team to consider whole life value and whole life cost issues during the preconstruction phase when finalising designs, supply chain selection, risk management and added value. It specifically provides for the Client Representative as project manager to organise and monitor team member contributions to Value Management (defined in Appendix 1 as a flexible but structured management approach aimed at achieving a solution that meets the Client's needs while achieving best value) as well as Value Engineering and Risk Management in relation to the project – with provision for particular details to be set out in the Partnering Documents.

In addition, PPC2000 contains a suggested KPI for reduced defects and zero defects as well as improved quality (clauses 4.2(iii) and 4.2(viii) refer).

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23 May 2008



Introduction to Pricing under PPC2000

**for use with ACA Project Partnering Contracts
PPC2000 and PPC International**

This PPC2000 Pricing Guide has been produced by members of the PPC2000 User Group, with special thanks in particular to the following individuals:-

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INTRODUCTION TO PRICING UNDER PPC2000

The pricing of a PPC2000 Partnering Contract is a two stage exercise intended to create cost certainty and transparency, and to encourage cost savings and added value. This Introduction provides references to relevant PPC2000 clauses and answers to typical pricing questions.

Additional information in relation to pricing under PPC2000 is available on the PPC2000 website www.ppc2000.co.uk.

An overview of the **Two Stage Procurement Model** established by PPC2000 is set out in **Annex 1**.

Words and expressions used in this Introduction have the meanings defined in PPC2000.

Agreed Maximum Price – what is this and how do you calculate it?

- The Agreed Maximum Price (AMP) is the price for the Project payable by the Client to the Constructor, to be finalised and agreed during the preconstruction phase after signature of the PPC2000 Project Partnering Agreement and prior to signature of the PPC2000 Commencement Agreement. It is supported by detail in the Price Framework and (under clause 12) comprises:
 - agreed Constructor Profit, Central Office Overheads and Site Overheads
 - agreed amounts built up through approved Business Cases for Constructor proposals in respect of Direct Labour Packages (work done by the Constructor itself) and approved Business Cases in respect of preferred Specialists (work done by Specialist subcontractors, suppliers and sub-consultants approved pursuant to single source proposals without Specialist tenders)
 - agreed amounts built up through approved results of Specialist tenders (for all work not subject to approved Business Cases)
 - agreed provisional sums (for all work remaining to be priced during the construction phase of the Project)
 - agreed risk contingencies approved after joint Risk Management processes (for risks priced by the Constructor)
- The AMP is subject to increase or decrease according to the agreed Change procedure (under clause 17) and in the event of claims for listed unforeseeable events of delay or disruption (under clause 18) and any specific mechanisms stated in the Price Framework
- The word 'Maximum' is a reminder that the Partnering Team should continue to seek savings in the AMP (under clause 12.10).

Budget – why is the Budget pre-agreed under PPC2000?

- The Budget should be agreed and stated in the Price Framework when signing the PPC2000 Project Partnering Agreement so as to establish agreed cost limits on subsequent design, risk and procurement activities;
- At each stage of design development PPC2000 provides (under clause 8.7) that the Design Team will take into account the Budget and provide updated cost estimates reconciled with such Budget.
- A precondition (under clause 14.1) to signature of the PPC2000 Commencement Agreement and to commencement of work on Site is that the Partnering Team members have achieved an AMP within the Budget subject to any agreed adjustments;

Consultant payments – how are these dealt with in PPC2000?

- Because PPC2000 covers the appointment not only of the Constructor but also of the Client's Consultants, the fees payable to those Consultants (whether as lump sums or rates or percentages) and the terms of payment need to be set out in Consultant Payment Terms forming part of the PPC2000 Contract;
- In order to claim additional fees following a Change in the Project or an unforeseeable event of delay or disruption (under clauses 17.8 and 18.7), any additional Consultant payment entitlements need to be stated clearly in the Consultant Payment Terms.

Discounts – are they permitted under PPC2000?

- Prompt payment discounts and other rebates between the Constructor and its Specialist subcontractors, sub-consultants and suppliers are only acceptable (under clause 12.8) if the relevant discounts or rebates have been agreed in advance by the Client;
- This is to ensure that the Client has a clear picture of all costs payable to Specialists and an equally clear picture of the Profit payable to the Constructor. Openness and clarity at the outset between Partnering Team members are extremely important.

Fixed prices – does PPC2000 achieve these?

- PPC2000 achieves fixed prices with the same degree of price certainty as any other contract, plus it offers the benefit of greater pricing robustness arising from the transparency of supporting cost information built up during the preconstruction phase appointment (under clauses 10 and 12);
- When the Client makes its early conditional appointment of the Constructor under the PPC2000 Project Partnering Agreement, they should agree amounts payable to the Constructor in respect of Constructor's Services during the preconstruction phase (under clause 12.1). However, such early Constructor appointment is not usually on the basis of a fixed price for the entire Project as its purpose is to govern activities undertaken with the Constructor to create savings, added value and a more robust fixed AMP before making an unconditional commitment. To do this, it is essential to agree up front the Constructor's Profit, Central Office Overheads and Site Overheads (under clause 12.4);
- If early Constructor activities (such as mobilisation or purchase of long lead-in items) are authorised under one or more Pre-Possession Agreements, these should state the amounts payable for such activities (clauses 13.3 and 13.4);
- Before PPC2000 becomes unconditional by execution of the Commencement Agreement, one of the stated preconditions (under clause 14.1) is finalisation of an AMP, which is a fixed price except to the extent that the parties specifically agree to leave amounts unfixed by way of provisional sums or target costs or cost reimbursement.

Incentives – what are the options under PPC2000?

- PPC2000 provides (under clause 13) for a variety of incentives dependent on what is agreed between the Partnering Team members;
- Shared saving arrangements and added value incentives may be set out in the Project Partnering Agreement or separately agreed. Any cost saving or added value proposal, for example by way of Value Engineering, is subject to approval by the Client (under clause 13.2);

- Variable Consultant and Constructor rewards can be linked (under clause 13.5) to achievement of the agreed Date for Completion (for example by way of agreed adjustments through bonus payments or if appropriate liquidated damages) or to the achievement of any of the targets stated in the agreed (KPIs).

Open-book – how does this work under PPC2000?

- Open-book denotes transparency of the cost information built up under PPC2000 and there are different ways that the parties may agree to apply such Open-book cost information;
- During the establishment of the AMP: the early conditional appointment of the Constructor ahead of full design means that, as remaining designs are released, the pricing of those designs can be undertaken on an Open-book basis (under clauses 10.3 and 10.5), whether through proposals put forward by the Constructor as Business Cases or by way of supplementary second-tier tender exercises run by the Constructor with potential Specialist subcontractors, suppliers and sub-consultants;
- In respect of provisional sums forming part of the AMP: if for any reason any part of the AMP remains unfixed at the point that a Commencement Agreement is signed authorising start on Site, a further Open-book approach can be applied at any time during the construction phase (under clause 17 and the Project Timetable) in respect of procedures to agree fixed costs for remaining elements of the Project;
- On a fully Open-book basis throughout the Project: a third option is to agree (in the Price Framework) that all or part of the AMP will be paid to reimburse actual expenditure by the Constructor whether or not limited or linked to any shared excess or shortfall against a target cost, and in this case the Open-book approach will be used to calculate all payments due. Although different Partnering Teams may agree to recognise different cost components when assessing actual expenditure, a model **Schedule of Cost Components** is set out in **Annex 2**.

Overheads – how are these dealt with under PPC2000?

- PPC2000 distinguishes between Central Office Overheads and Site Overheads (under Appendix 1), the latter being Project-specific and covering those categories of cost traditionally referred to as “preliminaries”;
- PPC2000 provides that the Constructor should agree (under clause 12.4) its Central Office Overheads and Site Overheads (whether as lump sums or percentages or agreed rates for particular items) subject only to agreed variations (for example to reflect an agreed Change in the Project Brief). Site Overheads can be administered and paid on an Open book basis, which can be linked to a shared saving incentive;
- While the amounts recoverable by the Constructor in the event of unforeseeable delay or disruption can include additional time-based Site Overheads, the recovery of additional Central Office Overheads in such an event is excluded (under clause 18.6).

Profit – what does this mean under PPC2000?

- Profit is defined in PPC2000 as the Constructor’s agreed gain from the Project (under Appendix 1);
- PPC2000 provides that the Constructor should agree (under clause 12.4) Profit (whether as a lump sum or a percentage) subject only to agreed variations, for example to reflect

an agreed Change in the Project or to incentivise the Constructor to achieve cost savings or to offer other added value;

- Varied Profit can be agreed as appropriate in the event of a Change to the scope or nature of the Project (by application of an agreed percentage or by an adjustment to an agreed lump sum). However, additional Profit is excluded (under clause 18.6) from the amounts recoverable by the Constructor in the event of unforeseeable delay or disruption.

Project Bank Accounts – what are they and how are they dealt with in PPC2000?

- A Project Bank Account is an account set up and run by the Client and the Constructor jointly which deals with payments to the Constructor and Specialists who are a party to that account.
- Subject to valuation in the usual way, the Client makes a payment into the Project Bank Account (rather than to the Constructor) and on the instructions of the Client and Constructor the bank pays the Constructor and to those Specialists who are signed up to the Project Bank Account the sums which are due and owing to them under PPC2000 or SPC2000. Specialists paid via the Project Bank Account are therefore paid at the same time as the Constructor. If Specialists are not party to the Project Bank Account, they are paid by the Constructor in the usual way.
- For all Projects where the Client is a public body, Project Bank Accounts should be used in order to comply with the OGC Guide to Best Fair Payment practices.
- Project Bank Accounts are covered in PPC2000 and SPC2000 by way of an optional Special Term (see loose leaf in new contracts and www.ppc2000.co.uk for further details).

Provisional Sums – how does PPC2000 deal with these?

- A provisional sum forms part of the PPC2000 definition of a Change Provisional sums should be clearly identified in the Price Framework and expended by application of the agreed Change procedure (under clause 17) subject to other agreed arrangements, for example a series of design, procurement and approval activities set out in the Project Timetable;
- The construction phase deliverables set out in the Project Timetable (developed under clause 6.2) can state deadlines and a procedure to agree a specific amount in place of each provisional sum, namely who will do what to achieve completion and approval of remaining designs, to organise the issue and return of subcontractor/supplier tenders and to obtain Client approval and authorisation of the quoted fixed amount to allow the relevant work or supply to proceed.

Retention – how is Retention dealt with in PPC2000?

- The only reference to Retention in PPC2000 (under clause 20.14) recognises that an amount may be withheld following Project Completion if so stated in the Price Framework, for release following rectification of defects;
- As an alternative, PPC2000 provides (under clause 19.9) for the Constructor to provide a retention bond, from a bank or insurance company acceptable to the Client, in a form to be agreed and annexed to the Commencement Agreement;
- Any other agreed arrangements in relation to Retention need to be set out in the Price Framework.

Risk pricing – how are risk contingencies dealt with under PPC2000?

- PPC2000 envisages (under clause 18.1) preconstruction phase joint Risk Management processes by all Partnering Team members (utilising a risk register and other techniques) so as to ensure that the parties take agreed actions within agreed periods of time in order to eliminate or reduce risks and their costs.
- PPC2000 also provides (under clause 12.9) that any proposed risk contingencies are to be notified by the Constructor to the Client, and are only incorporated as part of the AMP if and to the extent that they have been approved by the Client after joint Risk Management exercises have been agreed and implemented.

Schedule of Rates – can a Schedule of Rates be incorporated in PPC2000?

- Appointment of the Constructor under PPC2000 can be on the basis of a schedule of rates supporting calculation of all or part of the AMP, and this schedule of rates can then be incorporated as part of the Price Framework;
- However, if rates are to be agreed for particular works or services in the early conditional appointment of the Constructor under PPC2000, this will require sufficient design detail in the Project Brief for the Constructor to cost the relevant works or services and may limit the scope for later joint design development with the Constructor after its selection.

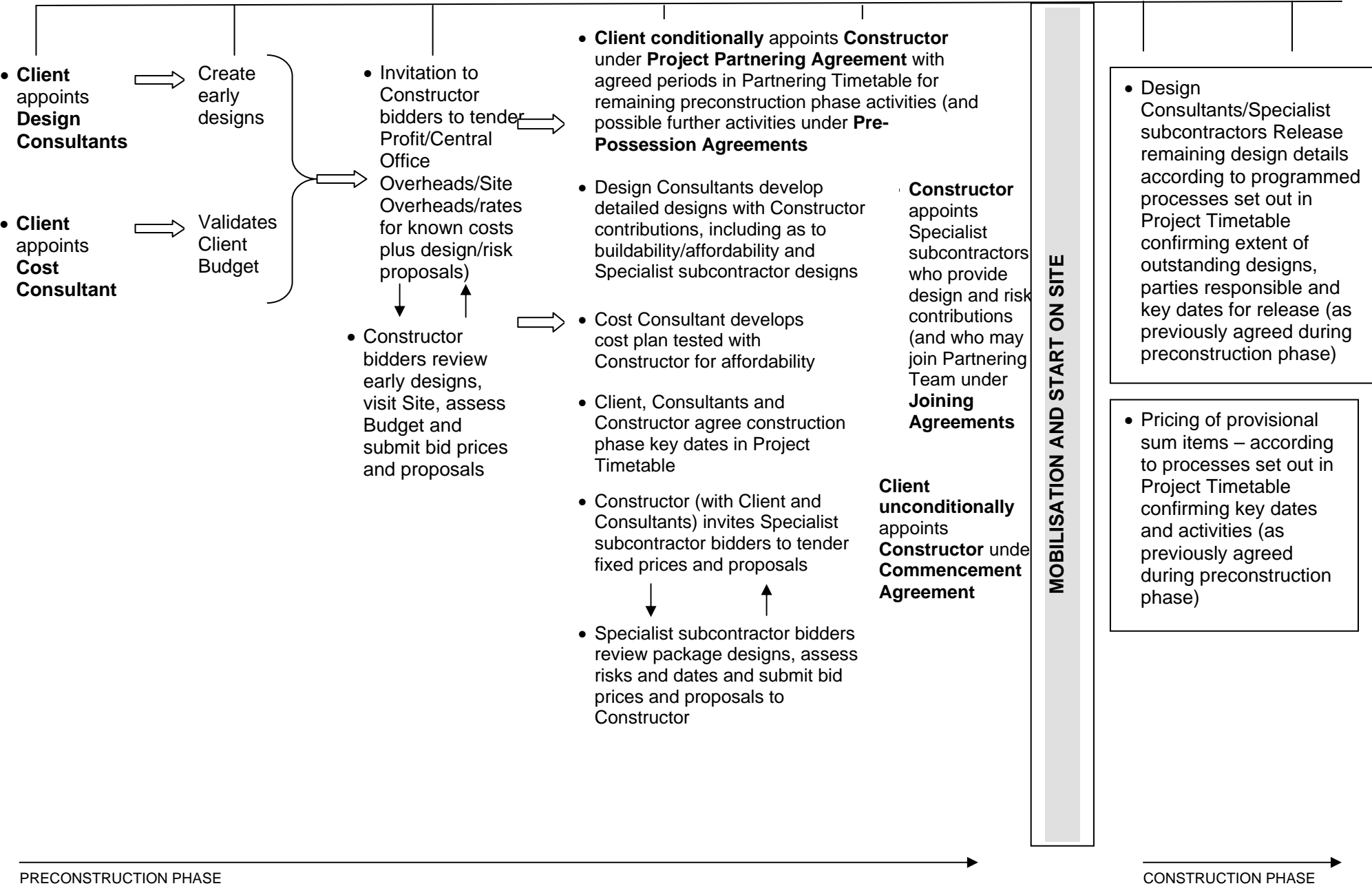
Target costs – how does PPC2000 deal with these?

- PPC2000 provides (under clause 8.7) for updated cost estimates to be produced with each stage of design development during the preconstruction phase of the Project. These cost estimates refine the previously agreed Budget and can constitute increasingly accurate target costs.
- In addition, PPC2000 recognises (under clause 18.2) that the Partnering Team members may agree risk sharing arrangements during the construction phase of the Project. Within agreed parameters, the AMP may constitute a target cost subject to adjustment by operation of this risk sharing in respect of expenditure of amounts above or below such target cost.
- The assessment of actual expenditure against a target cost and any related risk sharing arrangements should be set out in the Price Framework and can be calculated using a **Schedule of Cost Components** such as the model set out in **Annex 2**.

Termination prior to start on Site – what amounts are payable under PPC2000?

- During the early conditional appointment of the Constructor and Consultants under PPC2000 prior to start on Site, agreed amounts payable to Consultants should be stated in their Consultant Payment Terms and agreed amounts payable to the Constructor should be stated in the Price Framework;
- In the event of termination of the Partnering Team members' appointments prior to signature of the Commencement Agreement, the only amounts payable to the Consultants and the Constructor (under clause 26.1) will be those amounts specifically agreed as payable during the preconstruction phase, with no liability of the Client to pay any other amount to the Consultants or Constructor.

**Annex 1
PPC2000 Two Stage Procurement Model**



Annex 2

Schedule of Cost Components

1.0 People working on the Site

(those people directly employed by the Constructor and whose normal place of work is within the Site, or whose normal place of work is not within the Site but who are working on the Site)

1.1 Payments to people according to the time work while they are working on the Site

.1	salaries, wages and other emoluments
.2	subsistence or similar allowances
.3	fares and travel allowances (including the reasonable cost or allowances for the use of cars)
.4	employer 's contributions in respect of approved pension schemes
.5	insurance contributions, levy, tax or other payments imposed by statute and payable in respect of directly employed people by the Constructor in its capacity as an employer

paid in accordance with the Constructor 's normal terms and conditions of employment for such people and/or to comply with the Constructor's statutory obligations, but excluding redundancy payments not related to work on this Project.

1.2 Amounts paid by the Constructor to people who are not directly employed by the Constructor but who are paid by the Constructor for the ime worked while they are working within the Site.

1.3 In the case of salaries or wages for apprentices on a recognised apprenticeship scheme, a reasonable percentage may be added to cover pro-rata the time and cost of appropriate day or block release courses.

2.0 Materials and Goods provided by the Constructor

2.1 Payments in respect of materials and goods including an allowance for reasonable wastage, but exclude any cash, trade or other discounts:

.1	the invoice cost, including the invoice cost of delivery to the Site, of materials and goods obtained by the Constructor from manufacturers or stockists
.2	materials and goods supplied from the Constructor's stock or worked upon in the Constructor's workshops at the market price current at the date of their supply to the Site, together with any appropriate handling charges.

3.0 Plant, Services and Consumable Stores provided by the Constructor

3.1 Plant, services and consumable stores comprise:

.1	mechanical plant and power operated tools;
.2	non-mechanical plant, including hand tools;
.3	scaffolding and scaffold boards (including reasonable losses where hired);
.4	temporary roadways, shoring, earthwork support, centering, formwork, hoardings, temporary fans, temporary fencing, barriers, footways, temporary partitions and the like;
.5	temporary buildings;
.6	Canteens, sanitary accommodation, protective clothing and other safety and welfare provisions;
.7	temporary protection, weatherproofing and fire precaution measures;
.8	transport (including collection and disposal of rubbish, waste disposal site charges and plant transportation charges);
.9	equipment for drying out the Project and for testing and commissioning services installations (including any cost of using equipment incorporated into the Project);
.10	installations for temporary utility services and supplies;
.11	security arrangements for the Site and the Project;
.12	erection, installation, adaptation and resiting (where necessary), cleaning, maintenance and repair, dismantling and removal of temporary buildings, plant and equipment;
.13	fuel and other consumable stores required for the operation of plant, equipment and the provision of the facilities and services referred to above.

3.2 Payment for plant:

.1	the net cost to the Constructor, whether by hire charges or otherwise; or
.2	where provided by the Constructor, or by the Constructor's parent company or by a company, with the same parent company; hire rates agreed from time to time with the Client Representative or, in the absence of prior agreement, rates not exceeding those normally applied in the locality at the time the plant is used or, where applicable, on a use and waste basis.

3.3 Payment for services and consumable stores: the net cost to the Constructor.

4.0 Sundry Costs incurred by the Constructor

4.1 The net cost to the Constructor of the following:

.1	charges from work carried out by statutory undertakers;
.2	charges for water, electricity and gas used on the Site;
.3	rates or other similar statutory charges on temporary buildings for the Constructor's and Specialists' on-Site staff and those of the Client and its Consultants;
.4	payments for hoardings and similar licences, less any payments for advertising received by the Constructor;

.5	fees, royalties and similar charges
.6	furniture, furnishings, office equipment, stationery and office consumable for on-Site staff, including telephones, mobile telephones, email and fax equipment, computers, electronic data interchange and their programs, together with any related charges authorised by the Client Representative, less any credits obtained on the disposal of such items;
.7	postage and other delivery charges for correspondence sent from Site;
.8	reproduction of drawings and other documents generated on or necessary for use on Site;
.9	travelling and subsistence incurred in off-Site inspection of materials and work;
.10	premiums for any advance payment guarantee, performance bond or retention bond required by the Client and provided by the Constructor;
.11	premiums for any insurances required by the Client under clause 19;
.12	where the Constructor is and while it remains the principal contractor, any necessary further development of the Construction Phase Plan;
.13	progress photographs.

5.0 Specialist Work

- 5.1 In the case of work by Specialists: payments made by the Constructor in accordance with the relevant Specialist Contracts.

**PPC2000 User Group information can be found at
www.PPC2000.co.uk - see under 'Services'**

ACA publishes the following Project Partnering contracts and associated documents:

PPC2000 ACA Standard Form of Contract for Project Partnering (Amended 2003)
PPC International ACA Standard Form of Contract for Project Partnering
SPC2000 ACA Standard Form of Specialist Contract for Project Partnering (2004
Amendment)
SPC International ACA Standard Form of Specialist Contract for Project Partnering
TPC2005 - ACA Standard Form of Contract for Term Partnering
Guide to ACA Project Partnering Contracts PPC2000 and SPC2000

Documents can be purchased direct from ACA at the following address/email/telephone, or log onto the website at www.PPC2000.co.uk to order online.

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OGC Partnering Contract Review

Introduction

The JCT fully supports Achieving Excellence in Construction (AEC) and promotes all its facets within its range of contracts. This is particularly evident in the JCT – Constructing Excellence Contract (CE) which we believe meets all the principles of AEC. We set out below, in response to the questions aimed at establishing “To what extent does this contract satisfy the principles of Achieving Excellence in Construction?”, the reasons in support of this contention.

All JCT contracts provide a rigorous legal framework and are the agreed output from a wide cross-section of the supply and demand sides of the industry.

Product Related

1. *To what extent is the contract a procurement system in addition to a set of terms and conditions?*

A contract can only ever be part of a procurement system; the contract form itself is a document that reflects aspects of an approach to procurement and provides part of the overall legal framework for the project. CE fully recognises its role as part of the procurement process and its use shapes and facilitates the process. See for example the Risk Register and Risk Allocation Schedule (clause 5.1 and 5.2), Part 4 of the Contract Particulars dealing with Key Personnel and Supply Chain and Engagement of Supply Chain (clause 4.17). However CE is not just a set of terms and conditions; CE sets out a system to underpin collaborative working.

2. *Is any specific training required to appreciate the processes and principles of the contract in advance of using the contract?*

It is essential that anyone using a construction contract except for the simplest work (work for which the Building Contract for home owner/occupier is designed) should be trained in order to appreciate the principles of contract and the various procedures that flow. CE is usable by anyone trained in the use of contracts and contract administration. The nature of any specific training required by prospective users of CE is dependent upon previous training, experience and their outlook on contractual relationships. General awareness training is desirable but as the documents are written in a plain style they are straightforward for competent and experienced professionals to use. The one area where specific training may be required is with the use of the Project Team Agreement, as many users will not be familiar with the concept.

3. *What do you do to engage with and support those who use the contracts on live projects at all levels in the supply chain and how does this contribute to developing future versions of the contract and training?*

The JCT Council comprises representatives from employers, contractors, specialists and consultants. Those representatives provide views of their member organisations, which in turn represent thousands of members carrying out construction work throughout the supply chain. The representatives input their knowledge and experience into the development of CE and provide feedback on its use in practice. JCT provides written answers, at no charge, to anyone who has a query in respect of any JCT contract. JCT promotes seminars on CE with the RICS and others.

4. *Do you provide, endorse or recommend any planning and programming/ project management tools or software products for use with the contract?*

- *If so; which?*
- *If not; why not?*

JCT does not formally endorse or recommend any products for use with its contracts. JCT contracts do not inhibit the use of any tools necessary to carry out the functions necessary for delivering a project. User choice is paramount. Even if one were inclined to endorse or recommend products, the validation process would be problematic because to be meaningful, each product would, in our view, require independent rigorous testing. There is also the difficulty of an independent body such as JCT aligning itself with a particular producer to the exclusion of others. However, we do refer users to other information sources.

5. *Do you publish standard form Key Performance Indicators or Risk Allocation Models?*

JCT does not publish Key Performance Indicators or Risk Allocation Models. CE refers users to the Construction Industry KPI Pack 2006 and to the Constructing Excellence's KPI Zone (see paragraph 41 of the Guide (CE/G)) regarding performance indicators. JCT's view is that there is sufficient provision of published KPIs. In addition, many users have now developed their own specific KPIs, which generally are more relevant than published KPIs. JCT does not publish Risk Allocation Models because the primary risk issue is project specific. However, the Guide does include reference to the 'Be Guide to Risk Management', and CE's 'Risk – Collaborative Risk Management Guidance' and provides examples of and a methodology for risk allocation (pages 18 to 24). The intention of these links is to encourage good practice by providing easy access to guidance on risk management.

6. *Do you benchmark against other forms of contract?*
- *If so which and how frequently is the exercise carried out?*

The Drafting Sub-Committee and JCT Council review the JCT forms of contract against a background of developments in both practice and the law. The process is regular but informal, in that the production of objective (quantifiable) measures is not generally feasible.

Practice

1. *How does the contract assist in assessing the integrity and probity of the persons selected to take part at each point in the supply chain?*

CE provides for the early involvement of the Key Players in the supply chain (Part 4 of the Contract Particulars) and for them to enter into a JCT Project Team Agreement. The contract also contains an overriding principle of working together in a co-operative and collaborative manner and requires openness and the sharing of information (clause 2.1 of CE). Although these processes and provisions cannot guarantee the probity of the persons, there is a dynamic in the process. That dynamic may assist and produce a more rigorous vetting process both in a formal and informal sense and additionally influence behaviour.

2. *How and at what stages does the contract provide for the input of client and subcontractors in design development?*

CE provides for the flexible involvement of the client and for the design input of subcontractors and others throughout the pre-contract and post-contract stages. The philosophy of the contract is based on the premise that the participants come together at the earliest possible stage and stay involved for as long as appropriate. The processes for identifying risk and the allocation of risk (Section 5) and the sharing of risk (Section 7 and Part 7 of the Contract Particulars) invite early involvement of all the principal players. CE is useable for two-stage tendering and may be used independently at both stage 1 and stage 2.

3. *How does the contract align incentivisation with delivering value throughout the supply chain?*

Each contract let on CE (it is the intention that all suppliers throughout the supply chain enter into a CE contract – clause 4.17), whether at first tier level or any other level in the supply chain provides for incentivisation of the supplier (Section 7 and Part 7 of the Contract Particulars). The incentivisation relates individually to each of the suppliers. In addition, the Project Team Agreement provides for risk and reward sharing arrangements (Section 3) so that the members of that team can have ownership in the project (in addition to their own work) and share in the project as a whole. Value engineering solutions and the effective resolution of difficulties that arise will therefore feed directly into the calculation of the risk and reward sharing.

4. *How does the contract place key decisions into the open so they can be resolved in a timely manner irrespective of their place in the supply chain?*

The overriding principle contains a requirement of openness to share information (clause 2.1) and this is reinforced by clause 2.10, which requires co-operation with a view to ensure that relevant information is provided to all Project Participants in a timely fashion i.e. to meet Project Programme dates. The financial incentive referred to in the previous question encourages performance in this area because it provides a means to find the most effective solution to problems that may arise. CE expressly provides for a Project Team (clause 2.3) and for progress meetings (clauses 2.5 and 2.10). There is an obligation on the Supplier where it identifies an ambiguity or discrepancy to decide how to proceed but only after consultation, where appropriate, with the Project Team and to provide all information in his possession regarding performance of the Services (clause 4.1). The philosophy and structure of the contract provides for the early resolution of problems by the Project Team. As a failsafe, to avoid dispute forums, the CE contract requires notification of such problems, so that negotiation between senior executives can take place in a timely and open manner.

5. *How does the contract ensure the visibility of contingency sums?*

There is no specific reference to contingency sums or provisional sums in CE. In the Target Cost option, all sums that go to make up the Target are in fact provisional. The expenditure that accrues against any such item is recorded on an open book basis (clause 7.2), which the Purchaser has access to (clause 7.3). The Purchaser may object to any cost incurred, if it is an Excluded Cost or exceeds the Target Cost or any Guaranteed Maximum Cost (clause 7.5). Excluded Costs are defined (clause 1.1). With the Contract Sum option, if provisional sums are used, such sums would be part of the Payment Schedule and adjusted accordingly (clauses 7.23 and 7.24) and the Supplier can be asked to provide any additional information and explanation which the Purchaser may reasonably request (clause 7.17).

6. *Are there any circumstances where it is not appropriate to use the contract? Take into account factors such as:*

- *Inexperience or inflexibility of parties?*
- *Sector of industry*
- *Proportionality in terms maximum and minimum price and complexity and optimal size?*
- *Procurement model selected*

All JCT contracts are written for specific types of users or projects or both. CE sets out, on its inside cover, the criteria and circumstances for its use:

“Appropriate:

- for the procurement of construction works and construction related services;
- for use throughout the supply chain including the provision of professional services;
- for use where participants wish to engender collaborative and integrative working;
- for use in partnering.

Can be used:

- whether or not the supplier is to design;
- where the works are to be carried out in sections;
- for Target Cost or Lump Sum.”

CE is a flexible contract designed for use in any sector of industry, in conjunction with most procurement models (including call off contracts under framework arrangements), and for projects of almost any size, although very small projects may not justify the detail of the approach. As explained in the answer to Q2 (Product Related), some experience is always required but in terms of the Purchaser this may be overcome by appropriate professional support. Suppliers would always require proper accounting and management systems. The parties should be disposed to the concept of collaboration in order to maximize the benefits of the contract.

7. *How does the contract ensure/enable consistency of terms and processes at all points in the supply chain?*

CE is usable by a consultant supplier or any other supplier and at any tier in the supply chain. The provision on the engagement of the supply chain (clause 4.17) provides that all endeavours should be used to engage the Supply Chain on the CE contract. This is an attempt to ensure that all members of the Supply Chain work on the same terms.

8. *How is best value delivered to a client when supply chain profits and overheads are defined?*

Best value is deliverable to the client in many ways; there is no set approach to achieving this but value engineering makes a marked contribution. However, the use of CE provides a suitable framework because it requires proper consideration and allocation of risk, which means that clients should not pay contractors high premiums to cover inappropriate risks that subsequently do not arise. By separating and ring-fencing profit, the focus is on identifying risks and carrying out activities more cost effectively. It also facilitates whole life cycle

solutions and provides for the measurement of performance. Framework agreements can also assist because of the continuous improvement that arises when working together over a series of projects. Collaboration and the integration of the project team encourage participants to own the project as a whole and, with appropriate incentives, to work for the benefit of the project and provide value to the client.

Policy and Best Practice

1. *The OGC's Achieving Excellence in Construction Guidance was launched in March 1999 to what extent has this influenced the content of the form of contract and what additional sources of good practice data and policy have informed its development?*

The JCT – Constructing Excellence Contract together with its Project Team Agreement and Guide were designed, in conjunction with Constructing Excellence, specifically with Achieving Excellence in Construction in mind. That documentation expressly provides for the AEC attributes. CE built upon the Be Collaborative Agreement developed by the Reading Construction Forum and which took into account Latham's 'Constructing the Team' and Egan's 'Rethinking Construction'. Input provided by the Procurement Panel of the Local Government Association and from the Vehicle and Operator Services Agency (VOSA), who piloted versions of its predecessor on live projects, informed the development of CE.

2. *How does the contract interface with the OGC's published Project Integration Process and Gateways? Is any adaptation required to either or both of the Contract or the Gateway Process to accommodate these?*

CE is an integral part of the procurement process. It meets the OGC's requirement by providing an integrated process that fits with Gateway 2. CE encourages and facilitates integration of the project team and the supply chain.

3. *When should the contract be amended beyond any "Options" provided and the adaptation with user specific data?*
 - *How do you distinguish between adaptation and amendment?*

The documentation is stand-alone and does not require the user to select from different provisions except for those provided for in the Contract Particulars. There is no need to amend or adapt the contract but users may require supplementary conditions which the contract requires to be identified at Part 9 of the Contract Particulars e.g. security provisions. JCT would see adaptation as changing either the main processes or structure of the document, whereas a revision or revisions to the printed conditions would amount to an amendment.

4. *Can the contract remain a collaborative form if it is amended?*
- *Which clauses should remain un-amended or intact for the contract to remain a collaborative form?*

Collaboration has many different meanings and can arise regardless of the contract. It is a behavioural issue rather than a contractual one. However, CE is designed expressly to promote collaboration (see, for example, Section 2 of CE, paragraphs 9 to 42 of the Guide and the Project Team Agreement). If provisions in Section 2, such as clause 2.1 or 2.6, and perhaps to a lesser extent 2.10 or 2.11, were deleted, it would suggest that Parties may not wish to truly collaborate. However, their deletion need not be critical because collaborative behaviour might still follow.

5. *What processes does the contract contain to consider the sustainability of the construction activity and whole life operation of the asset?*

The Guide encourages collaboration at all stages throughout the project and the early involvement of suppliers, either using CE for a single stage appointment or two-stage appointment. Such early involvement facilitates the discussion and exploration of sustainability in the context of the project. JCT's commitment to sustainability, as evidenced by its recent consultation on the topic, is designed to encourage users to consider sustainability and to adopt appropriate performance indicators. CE specifically provides for Suppliers to give consideration to environmental and sustainability considerations in the selection of materials – clause 4.12. Other specific contract provisions can be inserted at Part 9 of the Contract Particulars. The success or otherwise of the approach to sustainability can be assessed and Section 6 provides for the monitoring and measurement of performance. JCT is currently studying the findings of its sustainability consultation and the output of this process will feed through into all its contracts later this year.

6. *What processes does the contract contain to ensure that the whole life value and whole life cost of the asset have been considered in its procurement?*

As described in the previous answers, early involvement facilitates the discussion and exploration of whole life costs and value. Paragraphs 37 and 38 of the Guide make specific reference to the value that Suppliers can bring to the Project and to whole-life cost options and solutions. It stresses the possibility of identifying solutions that offer value in terms of both capital and whole life cycle costs. The greatest benefits in this area accrue at the pre-construction stage and that is why the Guide refers to two-stage appointments and the use of CE as a pre-construction contract and as a construction contract. When used as a pre-construction contract the services required by the Brief should require the preparation of whole life cycle options. Again Section 6 provides for the monitoring and measurement of performance. Note that both in respect of sustainability and whole life cycle costs, the use,

where appropriate, of the JCT Framework Agreement would support these objectives.

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