THE NEC 3RD EDITION

ENGINEERING AND CONSTRUCTION CONTRACT

INTRODUCTION AND CRITICAL APPRAISAL

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Agenda

Engineering and Construction Contract 3rd Edition:

- Aim of Presentation
- History & Application
- Philosophy
- Contract Documents & Structure:
- Key Roles and Responsibilities
- Key Aspects of ECC
- Open Discussion Forum

Objectives

To provide a basic introduction and overview of the NEC suite of contracts in particular the ECC 3rd Edition:

- Raise awareness of the NEC suite of contracts
- Understand the main features and structure of the ECC
- Gain an appreciation of the main option clauses and their use for differing procurement strategies
- Understand the responsibilities of named individuals in the Contract
- Understand some of the key differences of the ECC compared to other contract forms

History & Application

Evolution

- Consultative edition issued January 1991
- 1st Edition of The New Engineering Contract (NEC) issued 1993
- 2nd Edition published 1995 renamed Engineering and Construction Contract (ECC)
- “NEC” retained as a brand name for suite of contracts
- 3rd Edition of all NEC contracts including the ECC issued 2005

History & Application

Application

- Civil Engineering
  - British Airports Authority – BAA (Terminal 5)
  - UK Water Companies
  - Environment Agency
  - Highways Agency
  - Rail
  - Power
- Building Works
  - Hospitals – Procure 21 UK
  - Schools
  - Housing

History & Application

Application

- UK Office of Government Commerce recommends the use of the NEC 3rd Edition
  - Central and Local Government
  - London 2012 Olympics
- Works, Services and Supply

History & Application

Geographical Spread

- UK
- South Africa
- New Zealand
- Australia
- Middle East

History & Application

Adoption by the Hong Kong Government

- Tang’s report in 2001 – effective changes from normal procurement approach
- NEC identified as a suitable contractual partnering form for HK
- Pilot Projects from various works departments
- DSD, HyD & ArchSD undergoing
- More to be identified as trial projects
- May extend to all projects
- Effectiveness to be tested – Is it a better way?
- Private Companies also now considering the use of the NEC

History & Philosophy

There were 3 key objectives for the drafting of the NEC:

- To offer flexibility
- To produce a contract that was clear and simple
- To provide a document that stimulates good project management

History & Philosophy

Flexibility

- Multi disciplinary – use in engineering and building work
- Design responsibility can reside in part or whole with either party
- Choice of pricing options – lump sum, target cost, cost plus
- Modular contract form – core clauses, main options and bolt on secondary options

History & Philosophy

Clarity and Simplicity

- Written in ordinary language, not construction terminology!
- Simple clause structure; avoids legalistic terminology
- Subjective decisions minimised
- Provision of guidance notes and flow charts

History & Philosophy

Provide a stimulus to good management

- The ECC is a management tool as well as a contract
- Requires timely and clear decision making process
- Clear allocation of responsibility
- Proactive risk management procedures
- Encourages collaborative working

Contract Documents & Structure

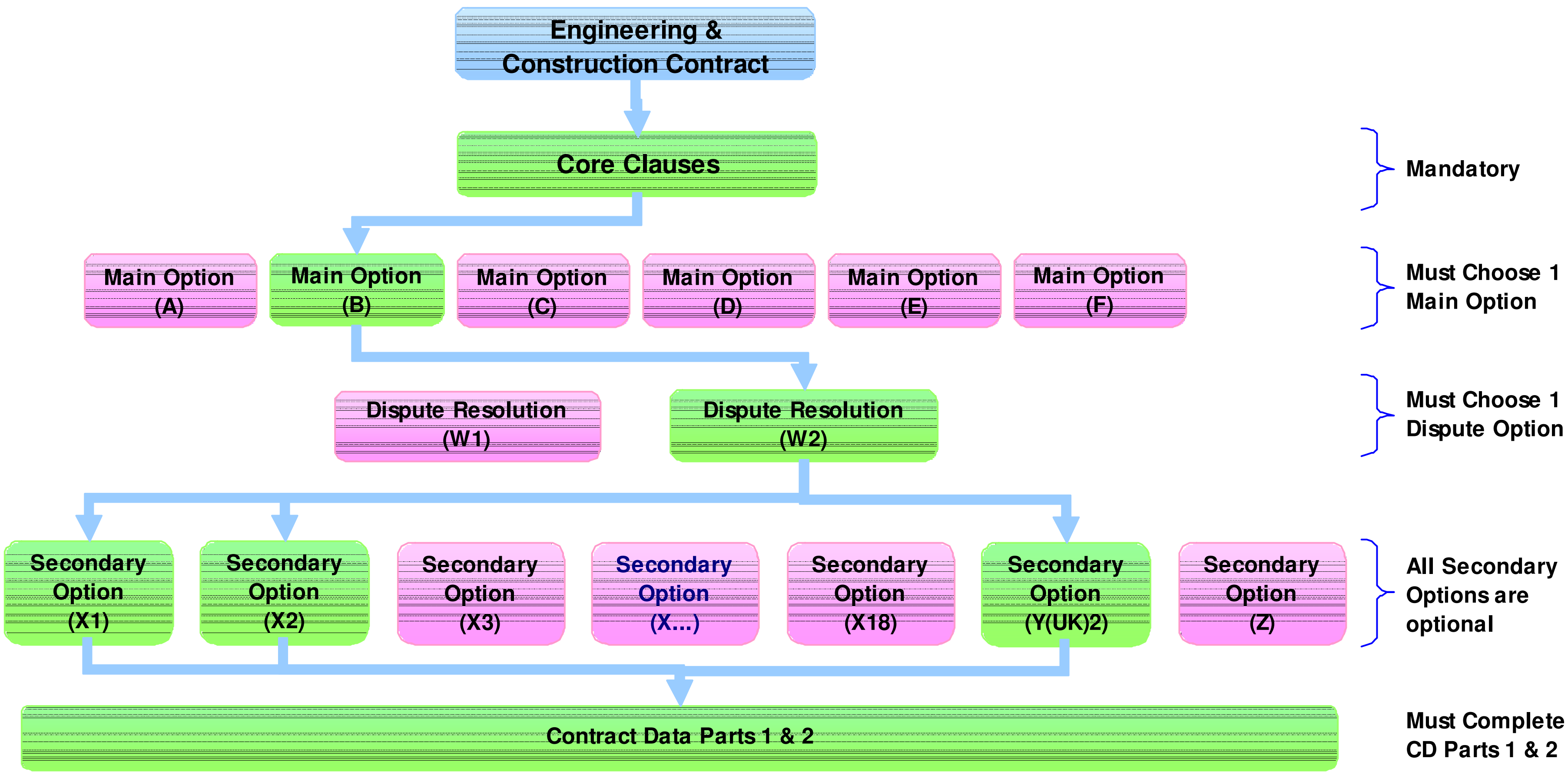
NEC3 is a suite of contracts and supporting documentation…

Contract Documents & Structure

- Documents within the NEC suite:
  - The Engineering and Construction Contract (ECC)
  - The Engineering and Construction Subcontract (ECS)
  - The Engineering and Construction Short Contract (ECSC)
  - The Engineering and Construction Short Subcontract (ECSS)
  - The Professional Services Contract (PSC)
  - Term Service Contract (TSC)
  - Framework Contract
  - The Adjudicators Contract
  - Supply Contract and Supply Short Contract

  Also included are…
  - Guidance Notes
  - Flow Charts
  - Procurement and Contract Strategies Guide

ECC Structure



Core Clauses

Common to all options and form around 85% of the contract:

1 - General

2 - The Contractor's main responsibilities

3 - Time

4 - Testing and Defects

5 - Payment

6 - Compensation events

7 - Title

8 - Risks and insurance

9 - Termination

Main Options

There are 6 Main Option clauses

(generally run to between 1 and 3 pages in addition to core clauses)

- Employer must select 1 of these:
- A – Priced contract with Activity Schedule
- B – Priced contract with Bill of Quantities
- C – Target contract with Activity Schedule
- D – Target contract with Bill of Quantities
- E – Cost Reimbursable contract
- F – Management contract

Option A

Priced contract with Activity Schedule

- Lump sum contract
- Project should be well defined at tender and subject to only minimal change
- Payment based on Activity Schedule defined and priced by the contractor
- Activity Schedule should align with programme to allow ease of administration
- Contractor only paid for <u>completed</u> activities
- Financial risk and therefore, reward largely borne by the contractor
- Suited to design and construct
- Risk is included in the activities and paid regardless of whether they occur
- Greater certainty of price
- Contractor has an interest in minimising cost

Option B

Priced contract with Bill of Quantities

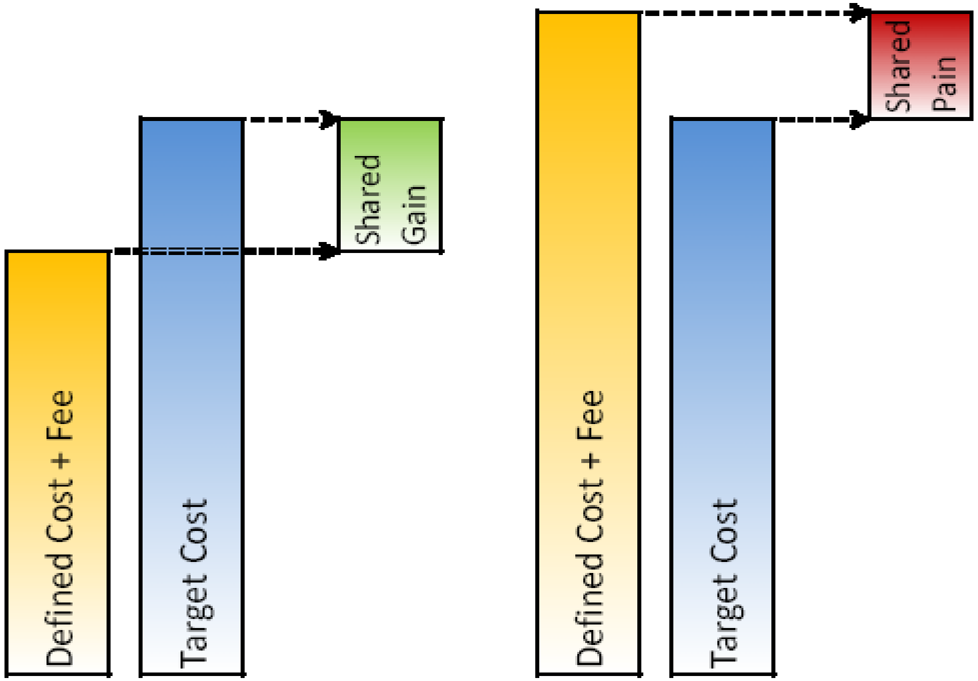
- Remeasurement contract
- BoQ produced by the employer, rates priced by contractor
- Contractor paid for quantity of work completed each month
- Risk of quantities / errors in BoQ borne by Employer
- Financial risk of rates largely borne by the Contractor
- Not suited to design and construct
- Works should be well defined at tender
- Risks are included in the BoQ and paid regardless of whether they occur
- Contractor has an interest in minimising cost

Options C & D

Target contract with Activity Schedule (C) / Bill of Quantities (D)

- Target cost contracts
- Works should be adequately defined to allow target to be set
- Target Cost set via Activity Schedule or Bill of Quantities
- Target Cost moves with changes (Compensation Events)
- Greater flexibility for the employer to develop his design
- Financial risk shared between the contractor and employer
- Contractor paid on a cost reimbursable (Defined Cost) basis
- Gain / pain shared (see illustration)
- Contractor and Employer both encouraged to control costs

OPTIONS C & D: Target Cost Illustration



- Proportion of saving / overspend received / paid by contractor is be determined by employer

Option E

Option E – Cost Reimbursable contract

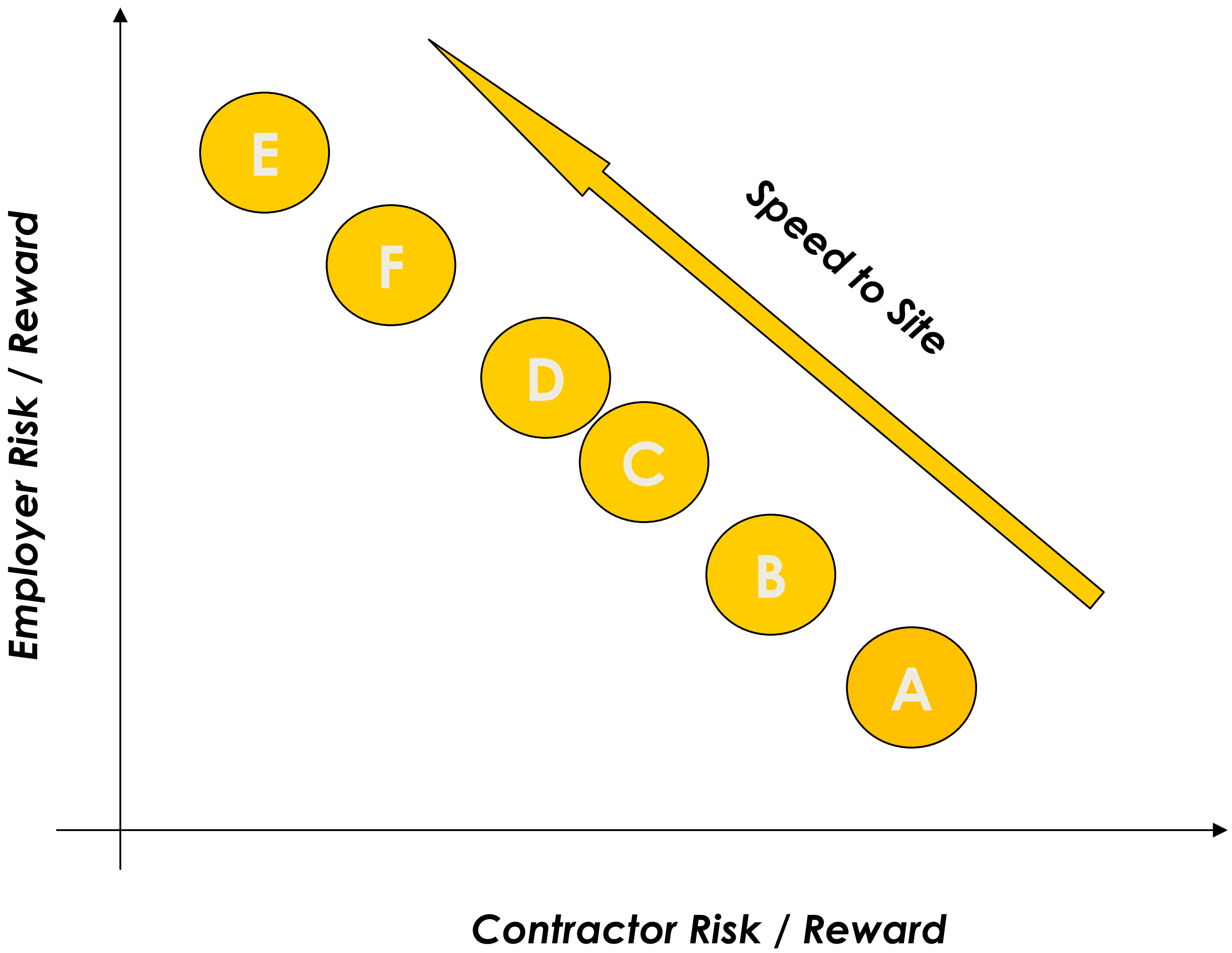
- Limited / no project definition required at tender stage
- Immediate / earlier start on site
- Contractor paid on a cost reimbursable basis
- Employer carries risk of cost increases
- Employer gets the benefit of all savings
- Limited financial risk borne by the Contractor (‘disallowed’ cost)
- Full flexibility available to the Employer
- Simpler post contract financial management (no contract sum)
- Potential for claims / disputes virtually eliminated

Option F

Option F – Management contract

- Limited project definition required at tender stage
- Earlier start on site
- Employer carries risk of cost increases
- Suitable for contracts with a high degree of specialist contractors
- Contractor directly employees subcontractors
- Contractor responsible for managing the subcontractors to time and quality
- Works subcontractors paid on prime cost
- Contractor tenders preliminaries and Fee

FINANCIAL RISK / REWARD OF MAIN OPTIONS



Dispute Resolution Options

There are 2 Dispute Resolution option clauses which concern rules and procedures for Adjudication and review by any subsequent tribunal

- Employer must select 1 of these:

- W1 Used unless the HGCR Act applies – e.g.. For use outside of the UK

- W2 Used where the HGCR Act applies

Secondary Option Clauses

- X1 Price adjustment for inflation (used only with Options A, B, C & D)
- X2 Changes in the law
- X3 Multiple currencies (used only with Options A & B)
- X4 Parent company guarantee
- X5 Sectional completion
- X6 Bonus for early Completion
- X7 Delay damages
- X12 Partnering
- X13 Performance bond
- X14 Advanced payment to Contractor
- X15 Limitation of Contractors liability for design to reasonable skill are care
- X16 Retention (not used with Option F)
- X17 Low performance damages
- X18 Limitation of liability
- X20 Key performance indicators (not used with Option X12)

Secondary Option Clauses

UK specific Secondary Options:

- Y(UK)2 HGCR Act
- Y(UK)3 Contracts (Rights of Third Parties) Act

Also, Z clauses…

- Bespoke contract specific amendments

Schedule of Cost Components

- There are two Schedules of Cost Components
- Shorter Schedule of Cost Components
  - used with Options A & B (and if agreed options C-F)
  - only used to assess compensation events
- Schedule of Cost Components
  - used with C-F only
  - used to assess compensation events and
  - recovery of the *Contractors* actual cost
- The schedules are a set of rules to define those components of the Contractors cost which are included in Defined Cost

Contract Data

- The Contract Data is in 2 parts:
- Part 1: Completed by Employer and issued as part of Tender documentation
  - Main and Secondary Options selected
  - Details of Employer, Project Manager, Supervisor, Adjudicator
  - Key Dates etc..
- Part 2: Completed by Contractor and returned as part of Tenderer's submission
  - Contractor's key people (e.g.. Agent, Construction Manager etc)
  - Tender price
  - Fee percentages / Data for use with Schedule of Cost Components

Contract Documents

- Form of Tender / Form of Agreement
- Contract Data Part 1 & 2
- Works information
- Site Information – Describes the existing site conditions
- Price – Activity Schedule (Options A & C) or BoQ (Options B & D)
- Programme (can follow later)
- Other executable documents such as Bonds, Guarantees etc.

Contract Documents

- **Works Information:**
- Key document; provides the contract with the flexibility it does by leaving the finer detail to be prescribed within the Works Info
- Is more than just a specification and drawings and is cross-referenced throughout the core clauses, examples:
  - 11.2(2) 'Completion is when the *Contractor* has done all the work which the Works Information states he is to do…'
  - 21.1 'The *Contractor* designs the parts of the works which the Works Information states he is to design'
  - 40.1 'Tests and inspections required by the Works Information…'

Roles and Responsibilities

ECC only identifies roles and responsibilities of the following parties:

- Employer
  - Project Manager
  - Supervisor
- Contractor
  - Subcontractor
- Adjudicator

Project Manager

- Appointed by the Employer to "*manage the contract for the Employer with the intention of achieving the Employer's objectives*" (ECC Guidance Notes)
- Employed for managerial skills; role not additional to a design appointment
- ECC assumes the Project Manager has the Employer's authority
- PM is constrained from unreasonable actions and should act as an impartial certifier (Costain v Bechtel)
- Can delegate some or all of his actions and is likely to need to…
  PM responsible for:
  - Review and acceptance of design
  - Review and acceptance of programmes
  - Issuing instructions
  - Certifying payments
  - Assessing compensation events and their impact on time and cost
  - …and more

Supervisor

- “Checking” role similar to Clerk of Works
- *“To check that the works are constructed in accordance with the contract”* (ECC Guidance Notes)
- Can issue Instructions to search for Defects
- Responsible for issuing Defects Certificate
- Can delegate some or all of his actions

Adjudicator

- Adjudicators Contract available as part of NEC suite
- Adjudicator is appointed by both Parties
- May obtain help from others after notifying the Parties
- Is paid on a time charge basis
- Unless otherwise agreed, the Parties pay the Adjudicator costs in equal shares
- Decision can be appealed to the Tribunal – Litigation or Arbitration

Partnering / Collaboration

1 General

Actions

10.1 The Employer, the Contractor and the Project Manager and the Supervisor shall act as stated in this contract and in a spirit of mutual trust and co-operation.

Early Warnings

- Proactive risk management process
- Contractor or Project Manager gives an early warning as soon as either becomes aware of a matter that may effect (can be Contractor or Employer risk)
  - Time
  - Cost
  - Quality
- Parties required to attend a risk reduction meeting
- At a risk reduction meeting those who attend co-operate in seeking solutions that will bring advantage to all those effected
- The focus is on resolving and mitigating issues rather than seeking to allocate blame and liability. While there is still time to positively influence the course of events

Time

Programme

- The programme is at the heart of the ECC contract
- There is an extensive and some might consider onerous list of requirements for each programme
- The programme has to be updated on a regular basis (normally monthly) and submitted for acceptance
- Once the Project Manager has accepted the latest programme it supersedes all previous versions
- The Employer is obligated to ensure that they and any third parties work within the times shown on the Accepted Programme (compensation event)

Compensation Events

- Compensation events bring together in one place the contractual provisions for evaluating the time and cost changes that will occur during construction
- Intention that cost and time of changes / variations are assessed and agreed contemporaneously with event arising and preferable before
- The drafters have deliberately broken the link between tendered prices and the evaluation of change
- Compensation events are evaluated on the basis of ‘Defined Cost’
- Rates or lump sums can only be used to assess by mutual agreement
- All compensation events attract entitlement to both cost and time (c/f JCT / ICE weather delays – time but no cost)

Compensation Events

- There are 19 standard compensation events heads with an additional 7 dependent upon which main and secondary options are chosen. Examples of compensation events: -
- (1) *Project Manager* gives and instruction to change the Works Information
- (2) *Employer* does not provide access to and use of a part of the Site
- (5) The *Employer* or Others do not work within the times shown on the accepted programme, or in accordance with the Works Information
- (12) The *Contractor* encounters “unforeseen” physical conditions
- (13) A weather measurement is recorded which is shown to occur on average less frequently than once in 10 years
- (14) *Employers* risks
- (19) Prevention, as event occurs which neither party could foresee, can prevent and stops the *Contractor* completing the works in time or at all

Compensation Events

SANCTIONS

- **Time Bar**
  - 61.3 *Contractor* notification tests – 8 week time bar
- **Default Acceptances**
  - 6.1.4 Default acceptance of Compensation Event if no response from the *Project Manager* within the correct timescales (1 week + 2 weeks)
  - 62.6 Default acceptance of quotation if no response from the Project Manger within the correct timescales (2 weeks + 2 weeks)

Proactive Management

- Contract imposes a heavy administrative burden on parties (even more so now with time bar to CE’s)
- PM and Contractor must be supported by appropriately resourced team to deliver the benefits
- Intention is to administer contract during currency of works to avoid lengthy and costly resolution of claims after completion

Key Considerations in Hong Kong

- Parties' knowledge and experience in NEC
- Parties' behaviours and attitudes in risk sharing and managing the contract
- Employer's procedures not align with the NEC (e.g. contractual timescale)
- Collaborative working
- Open book accounting
- Cultural changes
- ICAC

Summary

NEC is a ground breaking suite of contract endorsed by the OGC as best practice procurement, recommended by Latham and Egan. Growing in popularity and delivering real benefits to clients across the world by driving proactive management and collaborative working

In order to delivers its benefits *Employers* must understand the NEC is a fundamentally different form of contract requiring intensive management and a different approach by the parties in terms of both documentation and management requirements

- Open discussion

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