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Hong Kong Construction Association

Procurement using the NEC3



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Topics

Background to the NEC3

Aims and objectives of the ECC

The NEC family

Parties named in the ECC

Overview of the ECC

Case Studies

Conclusions

Questions

Background to the NEC3

Philosophy and Background to the New Engineering Contract (NEC)

- Originally conceived to improve the management of building projects
- The Institution of Civil Engineers ultimately sponsored the development of the contract and published it
- Consequently the perception has been that it was developed for civil engineering projects, which is not the case
- The NEC now stands out as the pre-eminent 21st century contract. It's ethos of communication and co-operation, team working and partnership are essential ingredients for innovative thinking, flexibility, improvement and best practice

Background to the NEC3

History of the NEC

- 1985 ICE commissioned a fundamental review of contract strategies for civil engineering design and construction
- 1986 Specification for a new style contract commissioned
- 1991 Consultative version published
- 1993 1st edition published
- 1994 Professional Services and Adjudicator's contracts published
- 1995 2nd edition published
- 1999 Engineering and Construction Short Contract and Short Sub-Contract published
- 2005 3rd edition published

Background to the NEC3

Why use the NEC?

Latham Report

- To bring an end to the adversarial approach that had become prevalent in the construction industry
- To produce a single contract with a wide application
- To stimulate productive management

OGC

- To satisfy the Achieving Excellence in Construction principles
- Only standard form of contract recommended for use

NAO

- 2005 Improving Public Services Through Better Construction Report singled out the ECC for recommendation

Background to the NEC3

Achieving Excellence in Construction - “Delivering Value for Money”

Management (cultural change)

- Roles and responsibilities

Standardisation

- Risk and value management
- Cost, time and quality control

Integration

- Teamwork and partnering – long term relationships
- Collaborative working practices
- Procurement routes

Measurement

- KPI's
- Post project implementation reviews

─ Aims and objectives of the NEC3

─ **Drafted with 3 clear objectives to improve:-**

1. Flexibility
 2. Clarity
 3. Good project management
- Encourage trust, collaboration and early risk identification
 - Requires a change in culture

─ Aims and objectives of the NEC3

─ Flexibility

- Multi-disciplinary
- Design & build or traditionally
- Risk allocation
- International application

─ Aims and objectives of the NEC3

─ Clarity

- Ordinary language
- Present tense defines actions of parties precisely
- Minimal subjective judgements
- Minimal legal jargon
- Difference between italicised terms and those with capital letters
- Procedural logic backed up by flow charts

─ Aims and objectives of the NEC3

─ Stimulus to good project management – two principles

- Foresight applied collaboratively mitigates problems and shrinks risk

and

- Clear division of function and responsibility helps accountability and motivates people to play their part

■ Aims and objectives of the NEC3

■ Stimulus to good project management

- Contract combines obligations with project management processes
- The role of the *Project Manager*
 - proactive
 - more onerous than other standard forms
- Programme recognised as a key management tool
 - programme updates/revisions
 - accepting programmes
- Risk management process – early warnings
- Changes based on agreeing effect (time and cost) as close to event as possible or prior to commitment
- Communications

■ The NEC3 Family

■ 6 Main Forms:-

- **Engineering & Construction Contract (ECC)** – between an Employer and a Contractor
- **Professional Services Contract (PSC)** – engaging consultants
- **Adjudicator’s Contract**
- **Engineering & Construction Short Contract (ECSC)** – for “simple” work (not necessarily low value)
- **Term Services Contract (TSC)**
- **Framework Contract**

- **Engineering & Construction Sub-contract**
- **Engineering & Construction Short Sub-contract**

Overview of the ECC

Main Option Clauses

- Option A -Priced Contract with Activity Schedule
- Option B -Priced Contract with Bill of Quantities
- Option C -Target Contract with Activity Schedule
- Option D -Target Contract with Bill of Quantities
- Option E -Cost Reimbursable Contract
- Option F -Management Contract

Overview of the ECC

Core Clauses

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

Overview of the ECC

Secondary Option Clauses

- 17 secondary option clauses available for use outside UK
- Includes:-
 - sectional completion
 - delay damages
 - retention
 - PCG
 - partnering

Parties named in the ECC

- The Employer
- The Contractor
- The Project Manager – administers the contract
- The Supervisor – administers testing, inspection & defects
- The Adjudicator
- Others - people or organisations (e.g. design team and cost manager) who are not the above, or any employee, Subcontractor or supplier of the Contractor

Overview of the ECC

The contract is formed by combining:

- Contract Data part one (Information provided by the *Employer*)
- Contract Data part two (Information provided by the *Contractor*)

Also includes:

- Articles of Agreement
- Contract Prices (Activity Schedule or Bill of Quantities)
- Works Information
- Site Information
- Programme and Risk Register

Overview of the ECC

Clients using the NEC in the UK

- Crossrail - £15.9bn (HK\$200bn)
- Olympic Delivery Authority - £9bn (HK\$113bn)
- Highways Agency - £7bn / annum (HK\$88bn)
- NHS Estates - £3bn (HK\$38bn)
- University of Cambridge - £50m / annum (HK\$630m)
- Environmental Agency - £150m / annum (HK\$1.9bn)
- BAA - £4.2bn (HK\$53bn) T5 at Heathrow
- Channel Tunnel Rail Link - £5.8bn (HK\$73bn)

Case Study

2012 Olympics

- £9bn programme – 2006 to 2012
- 200+ contracts
- Multi-discipline: civil, building, infrastructure, utilities, demolition, marine
- Procurement: traditional through to design and build
- NEC3
 - ECC Options A, C, E and F
 - PSC
 - TSC
 - Framework
 - ECSC

Case Study

NHS Estates

- £3bn to date
- ECC Option C Target Cost (GMP)
 - promotes problem solving
 - supply chain incentivisation
- Partnering – long term relationships
- Benchmarking and performance management
- Integrated supply chains
- Lean construction principles applied

Case Study

University of Cambridge

- All capital projects >£1m using ECC Option A
- Developed bespoke 2 stage design and build methodology
- Collaborative approach to managing project risk
- Davis Langdon – PM, Supervisor and QS
- 18 projects to date £1m - £65m
 - programme – 11% variance
 - cost – -1% variance
 - time to agree final account – 13 weeks
 - time to clear defects – 31 weeks

Case Study

Fuk Man Road Nullah, Sai Kung, NT

- HK\$50m
- Traditional procurement using Option C
- Employer and Project Manager – Drainage Services Department
- Supervisor and designer – Black & Veatch
- Contractor – Chun Wo
- Collaborative Behaviours & Performance Measurement - JCP
- NEC Technical Advisor – Davis Langdon UK
- Cost Auditor – Davis Langdon & Seah HK

Conclusions

Successful implementation depends upon:-

- Achieving desired cultural transition
 - proactivity, non-reactive
 - collaborative relationships
 - collective approach to problem solving
- Contract documentation – importance of the Works Information
- Programme - key management tool
- Risk management – early warnings and risk register
- Competence and training

Questions