

Welcome to the
**Use of the
 NEC3 Engineering Construction Contract
 as a project management tool**

Presenter :
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Aims :
 To educate participants about:

- ❖ what the NEC3 family of contracts is
- ❖ what its key objectives are
- ❖ with a focus on the 'stimulus to good project management' objective, and
- ❖ 'good practice' in implementing it
in order to
- ❖ increase the likelihood of projects being delivered to their time, cost & performance objectives.

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Agenda – Part 1 (up to break)

- ❖ A little bit about the me.
- ❖ A little bit about you.
- ❖ The development of the family.
- ❖ Other aspects of **Flexibility**
- ❖ **Clarity & Simplicity**
- ❖ **Stimulus to Good Project Management**
- ❖ Question & Answers / Discussion

} What the critic's say

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A little bit about me

- ❖ Been involved with the 'New Engineering Contract' since 1993, when started world's first PhD, under one of co-investigators.
- ❖ Got PhD in 1998 and started own business (+ 2 years part time industry funded research into collaborative procurement routes).
- ❖ Business initially did training in NEC followed by consultancy.
- ❖ Get involved at front end (preferably), but also at tail end if things don't work out.
- ❖ Written a fair bit on it.
- ❖ Do do other things !

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A little bit about you

- ❖ How many people are :
 - *Employer Project Manager* type people ?
 - *Contractor* project / site management types ?
 - *Employer* Quantity Surveyor types ?
 - *Contractor* Quantity Surveyor types ?
 - Designers ?
 - Refuse to be categorised ?

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Flexibility

Purpose : to promote easy selection of 'best fit' procurement route for project circumstances

- ❖ Whole family of interlocking contracts for works, goods & services.
- ❖ Similar structure & terminology across whole family to promote ease of learning and 'back to back'ness for process integration and contractual cover.
- ❖ Modular structure within each contract, so that can rapidly assemble 'best fit' procurement arrangement without expensive legal input.

Note : Whole family updated in 2005 and pre-fixed with NEC3

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The NEC3 Engineering & Construction Contract
'the Black Book'

- ❖ Originally published in 1993 as plain 'New Engineering Contract'
- ❖ Revised in 1995 with changed title of 'Engineering & Construction Contract' to reflect application to construction as well.
- ❖ Can be used for any engineering type sub-project, where there is a 'Site' to work on .
- ❖ Allows for any extent of 'fit for purpose' design stated in the 'Works Information'.
- ❖ Has a *Project Manager* and *Supervisor*.

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The NEC3 Engineering & Construction Subcontract
'the Purple Book'

- ❖ Back to back with the ECC, with following changes :
 - Option F : management contract disappears
 - *Project Manager* and *Supervisor* become *Contractor*, *Contractor* becomes *Subcontractor* etc.
 - Changes to timescales for responses, so communications can go down the line and back up
 - Slight changes to insurance provisions to avoid double insurance.
- ❖ For medium to major subcontracts where there is sufficient complexity to justify project management provisions & resources e.g. sufficient design &/or sub-subcontracting.

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The NEC3 Engineering & Construction Short Contract
'the dark Blue Book'

- ❖ For low risk, low complexity – not necessarily low value - work which does not justify use of the full **ECC black book**.

The NEC3 Engineering & Construction Short SubContract
'the light Blue Book'

- ❖ For low risk, low complexity – not necessarily low value - subcontracts which do not justify use of the full **ECSC purple book**.

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The NEC3 Professional Services Contract (PSC)
'the Orange Book'



- ❖ First published in 1994.
- ❖ For use with any Professional Services Contract, where services specified in Service Information.
- ❖ Allows the project management of Professionals.
- ❖ Consequently, may be too heavy handed for appointment of client empowered project manager.

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The NEC3 Adjudicator's Contract
'the green book'

- ❖ A 3 way contract for use between the parties to a dispute and the Adjudicator.
- ❖ Other NEC3 contracts typically have 2 dispute resolution options :
 - W1 : if you are not subject to the UK Housing, Grants, Construction & Regeneration Act 1996. This has time bars in it.
 - W2 if you are i.e. in UK construction & civil engineering. You have an NZ equivalent to the H,G,C&R Act, but with own nuances & there are clauses being drafted to reflect this.
- ❖ If the parties have a dispute & cannot resolve it themselves, they call in an Adjudicator as quick 'rough & ready' justice.
- ❖ His/her decision is enforceable until over-turned by courts or arbitration.

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The NEC3 Framework Contract
'the Brown Book'

- ❖ New to family in 2005
- ❖ For frameworks where either :
 - The quantity of defined goods is not known at start of Framework and will be 'called off' or
 - The Client knows they want a series of projects of a certain work type, but cannot define them at the start of the Framework.
- ❖ In both, avoids the need for repeat PQOs / tenders, with each order being let under another member of NEC3 family.
- ❖ In latter, may reduce costs and should promote continuous improvement in delivery over time.



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Framework Contract

- ❖ Simple 1.5 page contract + 1.5 pages of Contract Data
- ❖ For an *Employer* contracting with a *Supplier* to do work of a certain *scope* over a period of time, all let by *end date*. There could be a number of *Supplier(s)* competing for the same work once the framework is in place.
- ❖ It has Framework Information which specifies how the parties work together between / over & above each individual Work Package.
- ❖ *Employer* may place a Time Charge Order under the NEC3 Professional Services Contract option E for advice.
- ❖ The *Employer* uses the *selection procedure* to determine which *Supplier* will do the work.
- ❖ Having selected the *Supplier*, the *Employer* instructs a quotation for a Work Package to be built up under the *quotation procedure*.
- ❖ If he accepts this quotation, the Works Package is let through the issue of a Package Order and is carried out under an NEC3 contract with as much non-project specific Contract Data already filled in.

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The NEC3 Term Services Contract (TSC) 'the light Grey Book'

- ❖ New to family in 2005
- ❖ For any type of 'non-professional' services (the **PSC** has a term services option), such as
 - 'Hard' maintenance services
 - 'Soft' facilities management
 - Outsourcing arrangements such as IT or cloud services, but would need minor adjustments for a performance or outcome based specifications.
- ❖ Also allows for improvement projects if secondary option X19 : Task Order specified in original contract.
- ❖ Has a *Service Manager* and Service Information.



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The NEC3 Term Services Short Contract (TSSC) 'the dark Grey Book'

- ❖ Published in 2008.
- ❖ Still has Service Information, but no *Service Manager*, just the *Employer*.
- ❖ Can be used for both a base level of defined regular work &/or that called off.
- ❖ Is not for anything substantial or complex as, like other 'short' members of the family, promotes **Clarity & Simplicity** at expense of **Flexibility & Stimulus to Good Management**.
- ❖ Could be used for an already developed standard package service.

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The NEC3 Supply Contract 'the cherry Red Book'

- ❖ Published in Feb 2010
- ❖ For Supplies where there is an element of uniqueness. I.e. they are made specifically for the project.
- ❖ The design can be done either by the *Employer* or *Supplier*.
- ❖ Allows for project management of Supplier as has full project management provisions of other long contracts (but no main options except lump sum).
- ❖ Has *Supply Manager* & Goods Information.



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The NEC3 Supply Short Contract 'the sort of maroony Brown Book'

- ❖ Published in Feb 2010
- ❖ For standard manufactured items needed for a project.
- ❖ Allows for Batch Orders (but not suitable for a long term Call Off arrangement)
- ❖ Still has Goods Information
- ❖ No *Supply Manager* & reduced management powers for *Employer*.



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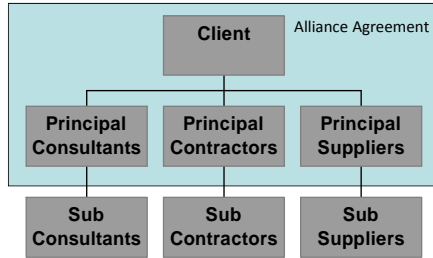
NEC Option X12 : Partnering Option

- ❖ Came out in June 2001
- ❖ Suitable for use in Alliances, so should be called 'Alliancing Option' in my view.
- ❖ A set of 'bolt-on' clauses to other members of the NEC family to turn into an alliance.
- ❖ Key features are : a Schedule of Partners, a steering group (the Core Group), Partnering Information and KPIs & Targets, with the option of setting incentives against each.

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Alliance Contractual Framework



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Other Aspects of Flexibility

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Contract Strategy / payment options available within each contract

	ECC	EC-SubC	PSC	TSC	Supply Contract	Short Contracts (not Supply)
A : Priced Contract with Activity Schedules (AS)	✓	✓	✓	✓	✓	✓
B : Priced Contract with Bill of Quantities	✓	✓				✓
C : Target Contract with AS / Price List	✓	✓	✓	✓		
D : Target Contract with Bill of Quantities	✓	✓				
E : Cost Reimbursable/ Time Based contract	✓	✓	✓	✓		✓
F : Management Contract	✓					
G : Term Contract			✓			
X12 : Partnering (project alliancing) option	✓	✓	✓	✓	✓	✓
X19 : Task Order				✓		

Activity Schedules explained

- ❖ Under option A, a fixed price contract.
- ❖ Contractor paid for completed activities.
- ❖ Activity Schedule drawn from programme.
- ❖ One of its main advantages is the emphasis it puts on programming at tender and during the contract to gain cash flow.
- ❖ Transfers maximum risk to *Contractor* by comparison with other options.

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E : Cost Reimbursable Contract

Contractor is reimbursed Defined Costs plus Fee.

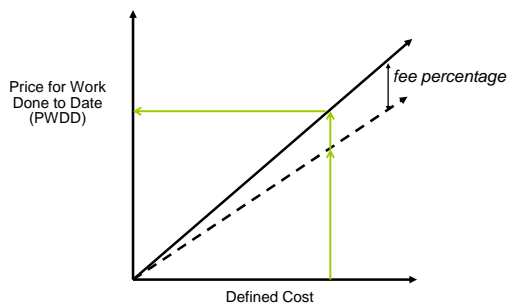
In ECC Option E :

Fee is the *fee percentage(s)* applied to Defined Costs.

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Cost Reimbursable Contract with *fee percentage*



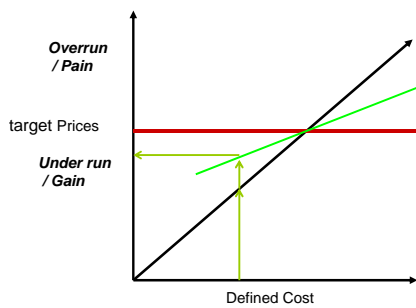
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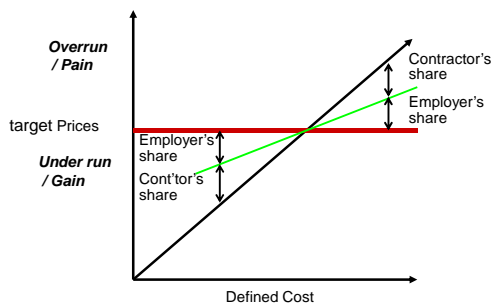
Option C & D : Target Cost Contracts :

- ❖ A development of CR contracts where the *Contractor* is reimbursed Defined Costs plus the Fee.
- ❖ Any cost over or under run vs. the target Prices is split in pre-agreed proportions.

Target Cost Contract



Target Cost Contract



Contract Strategy / payment options available within each contract

	ECC	EC-SubC	PSC	TSC	Supply Contract	Short Contracts (not Supply)
A : Priced Contract with Activity Schedules (AS)	✓	✓	✓	✓	✓	✓
B : Priced Contract with Bill of Quantities	✓	✓				✓
C : Target Contract with AS / Price List	✓	✓	✓	✓		
D : Target Contract with Bill of Quantities	✓	✓				
E : Cost Reimbursable/ Time Based contract	✓	✓	✓	✓		✓
F : Management Contract	✓					
G : Term Contract			✓			
X12 : Partnering (project alliancing) option	✓	✓	✓	✓	✓	✓
X19 : Task Order				✓		

Other Aspects of Flexibility

- ❖ Secondary options : "bolted on" to fine tune risk allocation
- ❖ International Use : catered for by secondary options and no paraphrasing of law
- ❖ *Contractor's* design : extent defined in the Works Information or equivalent.
- ❖ Multi-discipline work : exclusion of discipline specific procedures from CofCs. Either in WI or CD
- ❖ Subcontracting :
 - 'Purple Book' can be used
 - Short Subcontract for low risk & complexity work
 - Amended PSC can be used for design subcontract
 - Supply for specially designed goods
 - Short Supply for commodities / off-shelf goods.

Secondary Option Selection

	ECC	EC-SubC	TSC	PSC	Supply Contract
X1 : Price Adjustment for Inflation	✓	✓	✓	✓	✓
X2 : Changes in the Law	✓	✓	✓	✓	✓
X3 : Multiple Currencies	✓	✓	✓	✓	✓
X4 : Parent Company Guarantee	✓	✓	✓	✓	✓
X5 : Sectional Completion	✓	✓		✓	
X6 : Bonus for early Completion	✓	✓		✓	
X7 : Delay Damages	✓	✓		✓	✓
X8 : Collateral Warranty Agreements				✓	
X9 : Transfer of Rights				✓	
X10 : <i>Employer's</i> Agent				✓	
X11 : Termination by <i>Employer</i>				✓	
X12 : Partnering	✓	✓	✓	✓	✓

Secondary Option Selection

	ECC	EC SubC	TSC	PSC	Supply Contract
X13 : Performance Bond	✓	✓	✓	✓	✓
X14 : Advanced Payment	✓	✓			✓
X15 : Limitation of <i>Contractor's</i> liability to reasonable skill & care	✓	✓			
X16 : Retention	✓	✓			
X17 : Low Performance Damages	✓	✓	✓		✓
X18 : Limitation of Liability	✓	✓	✓	✓	
X19 : Task Order			✓		
X20 : Key Performance Indicators	✓	✓	✓	✓	✓
Y(UK)2 : H, G, C & R Act	✓	✓	✓	✓	
Y(UK)3 : Rights of 3 rd Parties	✓	✓	✓	✓	✓
Z : Additional Conditions of Contract	✓	✓	✓	✓	✓

Flexibility : What the critics says

CRITICISM

- ❖ It tries to be all things to all people
- ❖ But it fails.
- ❖ Sector contracts have evolved to suit the needs of the sector.
- ❖ Therefore, it does not cover the particular needs of that sector.

RESPONSE

- ❖ Yes. And now the family is complete, it can be.
- ❖ Where it has been used, it is rare that use is not continued. Therefore, by & large it succeeds.
- ❖ True, but often in a re-active way, following practice & case law.
- ❖ It is easily(ish) adaptable if you want to cover it in the same way or you can choose to do it differently.

Clarity & Simplicity

Purpose : to promote ease of understanding at 'doer' level & so reduce disputes due to misunderstanding or omissions

- ❖ Simple & common structure across whole family leads to ease of finding way around any contract
- ❖ Flow charting to ensure logic : hints at process of project management
- ❖ Shorter sentence length & use of bullet points
- ❖ Less subjectivity: preciser definitions, risk allocation & Roles & Responsibilities'
- ❖ Defined Terms with Capital Initials to avoid replication
- ❖ Contract specific information in *italics* in Contract Data
- ❖ ECC is about a third of the length of traditional contracts

Clarity & Simplicity : What the critics say

CRITICISM

- ❖ No case law, so don't use until there is.
- ❖ How can you know its proper interpretation then ?
- ❖ You need Guidance Notes to understand it then ?
- ❖ It's written in "Janet & John" language, not legalese.
- ❖ I don't understand this "Plain English".

RESPONSE

- ❖ There is a case law, but a bit like saying "don't use that bridge until its fallen down".
- ❖ It's written in plain English, with Guidance Notes, so you don't need to refer to textbooks & lawyers.
- ❖ No, they are *not* an interpretation, but explain the thinking behind & consequences of each set of clauses.
- ❖ Yes, that's so that do-ers can understand it without referring to lawyers & text books.
- ❖ That's because your a traditionalist / lawyer coming at it with that mindset.

Stimulus to Good Project Management

Purpose : Range of contractual mechanisms and incentives to promote collaborative project management, thereby increasing predictability of time, cost & quality being delivered.

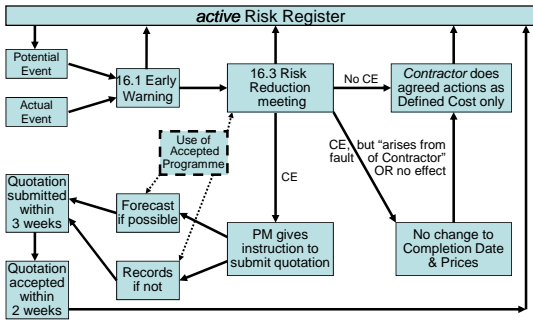
It is founded on three key principles :

1. Foresighted, co-operative management shrinks risk and mitigates problems
2. Both parties are motivated to work together if it is in their professional and commercial interests to do so
3. Clear division of function, responsibility (& risk) helps accountability and motivates people to play their part

Foresighted, co-operative management shrinks risk and mitigates problems

- ❖ A regularly updated and agreed programme with method statements & resources showing timing and sequencing of *Employer* and *Contractor* actions
- ❖ An active Risk Register stimulating active risk management
- ❖ An 'early warning' procedure for identifying future problems & minimising their impact
- ❖ Assessment of time and cost as contract progresses ideally before work done, but within set timescales
- ❖ Stated maximum time scales for actions of parties

Overview of how change is dealt with



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Both parties are motivated to work together if it is in their professional & commercial interests to do so

- ❖ Statement of events for which *Employer* is liable : clear definitions of compensation events (CEs) in one place
- ❖ Sanctions on the *Contractor* to :
 - early warn
 - submit a first programme containing information required
 - maintain an up to date Accepted Programme
 - provide notification of CEs within set timescales
 - provide realistic and timely quotations to these CEs
- ❖ Sanctions on the *Project Manager* to make timely decisions on the *Employer's* behalf : CEs + deemed acceptance of CEs
- ❖ More structured method of calculating changes in *Contractor's* time & costs : a dedicated detailed CE process + the Schedule of Cost Components
- ❖ Margin on compensation events is tendered : the *fee percentage(s)*

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Feedback on Stimulus to Good project Management

CRITICISM

RESPONSE

- ❖ You can do this under any form of contract.
- ❖ People make projects work, not contracts.
- ❖ If you don't have a good programme etc, then the contract falls apart.
- ❖ Where's the proof it works ?
- ❖ True, but the NEC3 makes it a contractual obligation & there is often a sanction if you don't. So it makes it more likely you will.
- ❖ It's a combination of people, systems & good project practices + in a multi-party contract : commercial alignment, clear obligations & remedies, R&R's and risk allocation etc. NEC addresses the latter.
- ❖ Partly true : where people haven't operated the contract then no worse than under other forms. If only one party is, then they are in position of strength. If both parties, then a darn good contract.
- ❖ Can never have absolute proof due to uniqueness of projects, but successful projects, expanding use & research feedback.

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Things we can cover in more depth

1. Application of different members of the family.
2. Contracting strategy at main payment option level : what are they and when to use them.
3. Use of secondary options & other aspects of flexibility.
4. Assembling a contract & evaluating tenders under the NEC
5. Role of the *Project Manager & Supervisor*
6. The change management clauses: the Accepted Programme, early warnings & risk reduction meeting, the Risk Register, compensation events (definitions, process, criteria for evaluation).
7. Contract administration, including demonstration of 'cloud' administration system.
8. Getting the most out of the NEC : 'very good' practice in the operation of the project management clauses.

Exercise

- ❖ On your own, spend a few moments thinking about "what can I get out of the remainder of the day that would make it really worthwhile ?"
- ❖ Have a discussion in small groups of 3'ish to stimulate thought.
- ❖ For each item you want covered, write down on a separate Post-It.
- ❖ Place on Flipcharts around room which have number identified on them which correlates with previous slide.
- ❖ Get into groups, amalgamate Post-Its : remove duplication and group in similar themes.
- ❖ Feedback after break.

Thank you

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