



Development Bureau



PRACTICE NOTES

New Engineering Contract (NEC)

Professional Services Contract (PSC)

for Public Works Projects in Hong Kong

Development Bureau

**Practice Notes for New Engineering Contract (NEC)
– Professional Services Contracts (PSC) for
Public Works Projects in Hong Kong**

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1 EXECUTIVE SUMMARY

1.1 PURPOSE OF THE PRACTICE NOTES

1.1.1 To cater for wider adoption of New Engineering Contract (NEC) form in public works projects in the coming years, the Development Bureau (DEVB) promulgates the Practice Notes to facilitate Works Departments (WDs) to take forward this initiative. The Practice Notes aim to provide guidance, performance benchmarking and alignment of practices of different WDs in the preparation and administration of public works contracts and consultancy agreements using the NEC form. The NEC form comprises the Engineering and Construction Contract (ECC), Term Service Contract (TSC) and Professional Services Contract (PSC) which are covered by three different Parts of the Practice Notes. The Practice Notes are intended to be a living document which will be updated from time to time on a need basis.

1.2 KEY TOPICS OF THE PRACTICE NOTES

1.2.1 Part C of the Practice Notes focuses on common challenges encountered by WDs at pre-tender and tender stages and the practical issues in managing NEC PSC contracts, with due considerations to the prevailing Government guidelines and procedures. Among the various topics of the Practice Notes, the following are key ones that warrant special attention:

a. Option Selection

Considerations in the detailed evaluation of the main Options are set out in Section C4.2.

b. Pain/Gain Share Mechanism for Target Cost Contracts

50:50 split of pain / gain for the first 10% of over spending (i.e. the *Employer's* expenditure is normally capped at 105% of the final target cost) and for all range of under spending is recommended. Nevertheless, WDs may adjust the recommended mechanism to suit the needs of individual projects as detailed in Section C4.4.

c. Preparation of Pre-tender Estimate

Guidelines on preparation of pre-tender estimate (PTE) are outlined in Section C4.5.

d. Drafting of Tender Documents

The set of standard amendments to NEC clauses (Library of Standard Amendments to NEC PSC), *additional conditions of contract* (Z clauses), sample templates of Contract Data Part one and Part two, Memorandum of Agreement, proforma for *activity schedule* and fee proposal, letter for invitation of technical and fee proposals, guidelines for technical and fee proposals, etc. are available in the NEC Knowledge Management Platform of the Works Group Intranet Portal of the DEVB.

e. Building up a Partnering Culture

Good practices adopted in previous NEC pilot projects, such as the setting up of steering committee, organization of partnering workshops, etc. are introduced in Section C6.1.

f. Effective Project Management

Guidelines on project management, including management of time, cost, risks and quality, are included in Sections C6.2 to C6.5. Issues such as proactive

management of project risks, assessment of NEC-compatible programme, *period for reply*, etc. are covered in detail.

g. Performance Benchmarking

WDs are required to submit returns to the DEVB or update the relevant parts of the Public Works Project Information System (PWPIIS) regularly to provide key performance information for the purpose of benchmarking NEC performance in the long term.

h. Effective Knowledge Sharing

An Inter-departmental Working Group on NEC Pilot Projects has been set up as a knowledge exchange platform for further development or refinement of the Practice Notes in the medium term.

2 BACKGROUND

2.1 THE HISTORY OF NEC IN HONG KONG

2.1.1 In 2000, the Government of the Hong Kong Special Administrative Region (the Government) set up the Construction Industry Review Committee (CIRC) to review comprehensively the condition of the construction industry for improvement. The CIRC published a report in 2001 entitled “Construct for Excellence” which distinguished amongst others that the construction industry was highly fragmented with an adversarial culture and recommended wider adoption of partnering approach to construction projects, and the integration of partnering approach into a contractual relationship.

2.1.2 Since then, non-contractual partnering has been adopted in more public works projects to enable the delivery of projects based on cooperative working practices. In response to the recommendations in the CIRC report, the Government has also examined suitable form of contract embracing partnering approach through establishing a contractual relationship, and have decided to try out the NEC form, which has proven track record of excellent project results in the procurement of major infrastructure and building projects in overseas countries. The NEC promotes co-operation, mutual trust and collaborative risk management between contracting parties. The first NEC pilot project commenced in 2009 and was completed in 2012, with satisfactory results in terms of collaborative working and assurance in project time and cost.

2.1.3 By early 2016, a number of public works projects have adopted the NEC form using different Options and covering a wide variety of works. The Government has had satisfactory results for those completed and ongoing pilot projects, which responded and supported the use of NEC thereafter. As an overview, the NEC can generally provide a better environment for contracting parties to manage project and construction risks, and to deal with the issues in a

collaborative manner for the benefit of the whole project. In this connection, the Government has extended the application of the NEC in public works project procurement after 2016, in particular, the adoption of target cost Options (i.e. ECC Options C and D) in suitable mega scale projects over HK\$ 1 billion, such as tunnelling works, high speed roads, land formation works, etc. The decision and justifications as to whether or not to adopt NEC in works contracts and consultancy agreements should be documented and endorsed by public officers at D2 rank or above of WDs.

2.1.4 To provide guidance for WDs in the preparation and administration of public works projects using the NEC form, the Government, acting through the DEVB, undertook a comprehensive study to prepare a set of Practice Notes which provide guidance on the use of the NEC including ECC, TSC and PSC for procurement of public works projects.

3 GENERAL INFORMATION OF NEC CONTRACTS

3.1 SELECTION OF CONTRACT (ECC/TSC/PSC)

3.1.1 The current list of published NEC contracts and a brief description of each are tabulated below:

	NEC Title	Abbr.	When Should be Used
Works Contracts	Engineering and Construction Contract	ECC	For the appointment of a contractor for engineering and construction work, including any level of design responsibility
	Engineering and Construction Subcontract	ECS	For the appointment of a subcontractor for engineering and construction work where the contractor has been appointed under the ECC
	Engineering and Construction Short Contract	ECSC	As an alternative to ECC and is for use with contracts which do not require sophisticated management techniques, comprise straightforward work and impose only low risks on both the employer and the contractor
	Engineering and Construction Short Subcontract	ECSS	As a subcontract to ECC or ECSC and is for use with contracts which do not require sophisticated management techniques, comprise straightforward work and impose only low risks on both the contractor and the subcontractor
Term Contracts	Term Service Contract	TSC	Used for the appointment of a contractor for a period of time to manage and provide a service such as planned or unplanned maintenance
	Term Service Short Contract	TSSC	Used for the appointment of a contractor for a period of time to manage and provide a service such as planned or unplanned maintenance and is for use with contracts which do not require sophisticated management techniques, comprise straightforward work and impose only low risks on both the employer and the contractor

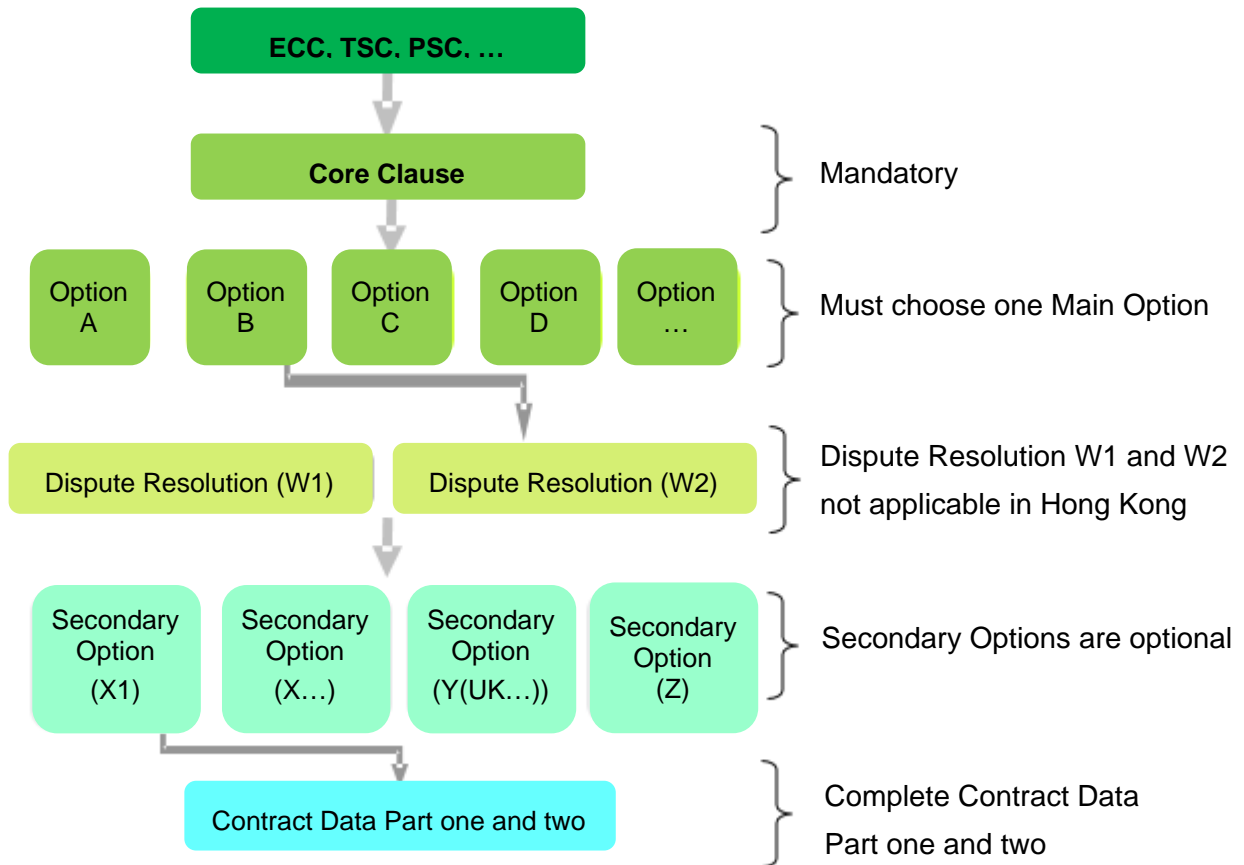
	NEC Title	Abbr.	When Should be Used
Consultancy Services	Professional Services Contract	PSC	Used for the appointment of a consultant to provide professional services
	Professional Services Short Contract	PSSC	Used for the appointment of a consultant to provide professional services and is for use with contracts which do not require sophisticated management techniques, comprise straightforward work and impose only low risks on both the employer and the consultant
Supply	Supply Contract	SC	Used for procurement of goods and related services
	Supply Short Contract	SSC	Used for procurement of goods and related services under a single order or on a batch order basis and is for use with contracts which do not require sophisticated management techniques and impose only low risks on both the employer and the supplier
Others	Framework Contract	FC	Used for the appointment of one or more contractors to carry out construction works or to provide design or advisory services on an “as instructed” basis over a set term
	Adjudicator’s Contract	AC	Used for the appointment of an Adjudicator to decide disputes

Option Structure

3.1.2 The ECC, ECS, TSC and PSC offer a range of Options that build up the contract terms and conditions to suit individual works or services, of which the *Employer* will select what he considers the most suitable Option to achieve value for money. At the heart of contract conditions are the core clauses, which will determine the essential common terms. In connection with this, a main Option should be selected, which will determine the particular payment mechanism and risk allocation between the *Employer* and the *Contractor / Consultant* as appropriate. Then secondary

Options should be chosen to combine with the main Option clauses to form the core parts of a contract.

3.1.3 A flowchart of the NEC formation is shown below:



3.1.4 For Short Contracts (i.e. ECSC, ECSS, TSSC, PSSC and SSC), Supply Contract, Framework Contract and Adjudicator’s Contract, selection of Options is however not required.

3.1.5 The Practice Notes is intended to assist WDs in preparing and administering ECC, TSC and PSC, and therefore will not cover other types of the NEC forms. Part C of the Practice Notes focuses on PSC.

PART C – PROFESSIONAL SERVICES CONTRACT (PSC)

C4 PRACTICE NOTES FOR PRE-TENDER STAGE

C4.1 PREPARATION OF TENDER DOCUMENTS

C4.1.1 NEC Tender Documentation

C4.1.1.1 The contract documents of consultancy agreements in traditional General Conditions of Employment (GCE) form normally comprise:

- Memorandum of Agreement
- General Conditions of Employment
- Special Conditions of Employment
- Schedule of Fees
- Brief
- Schedule of Resident Site Staff Standards and Duties (where appropriate)

C4.1.1.2 The contract documents of consultancy agreements in the NEC PSC pilot projects normally comprise:

- Memorandum of Agreement and its Schedule
- the NEC PSC core clauses, the clauses for the concerned NEC PSC main Option and the applicable secondary Options in the NEC PSC booklet as identified in the Contract Data and as amended or supplemented by the Schedule to the Memorandum of Agreement;
- *additional conditions of contract*
- Contract Data Part one provided by the *Employer*
- Contract Data Part two provided by the *Consultant*
- Priced *activity schedule*
- Scope
- Schedule of Resident Site Staff Standards and Duties (where appropriate)

C4.1.1.3 The table below compares the contract components of the traditional GCE form and the PSC form used in the pilot projects.

Traditional GCE Form	PSC Form
Memorandum of Agreement	Memorandum of Agreement
General Conditions of Employment / Special Conditions of Employment	NEC PSC core clauses, clauses for selected main Option and applicable secondary Options as amended by the Schedule to the Memorandum of Agreement
	<i>additional conditions of contract</i>
	Contract Data Part one
Schedule of Fees	Contract Data Part two <i>activity schedule</i> (for Option A and C)
Brief	Scope
Schedule of Resident Site Staff Standards and Duties	Schedule of Resident Site Staff Standards and Duties

C4.1.1.4 The standard amendments to the NEC clauses (Library of Standard Amendments to NEC PSC), *additional conditions of contract* (Z clauses), sample templates of Contract Data Part one and Part two, Memorandum of Agreement, proforma for *activity schedule* and fee proposal, letter for invitation of technical and fee proposals, guidelines for technical and fee proposals, etc. can be found in the NEC Knowledge Management Platform in the Works Group Intranet Portal of the DEVB. If WDs wish to make any amendments to these documents for their repeated use or placing in the respective library for use by others, they should submit their proposed amendments with justifications to seek legal advice from LAD(W) of the DEVB and approval from the DEVB who may consult the Inter-departmental Working Group on NEC Pilot Projects and/or the Steering Committee on NEC Pilot Projects where appropriate. For other non-standard amendments to the NEC PSC standard documents or non-standard *additional conditions of contract*, Memorandum of Agreement, preambles to *activity schedule*, proforma for fee proposals, letter for invitation of technical and fee proposals and guidelines for technical and fee proposals to suit specific needs of individual contracts, WDs should also seek legal advice from LAD(W) of the DEVB and approval from the DEVB unless otherwise specified in the Practice Notes. Also, for the minimum items of activities stated in the proforma for *activity schedule* for individual contracts, WDs should seek

approval from a public officer at D2 rank or above. For other parts of the tender documents, approval procedures as stated in the Handbooks of the Architectural and Associated Consultants Selection Board (AACSB) and the Engineering and Associated Consultants Selection Board (EACSB) or appropriate technical circulars and circular memoranda issued by the DEVB should continue to be followed.

Scope of Contract

C4.1.1.5 The Scope of public works contracts normally includes the following sections:

- Introduction
- Description of the Project
- Objectives of this contract
- Descriptions of this contract
- Material to be provided by the *Consultant*
- *Services* to be provided by the *Consultant*
- Programme of implementation
- Progress reports
- Financial management
- Standards and specifications [Optional]
- Checking and certification of the design [Optional]
- Compensation events and other commitments to works contracts [Optional]
- Resident Site Staff [Optional]
- Control of the Project and this contract [Optional]
- Material to be provided by the *Employer*
- *Consultant's* office and staffing
- Subconsultant services
- Surveys [Optional]

C4.1.1.6 While a sample Scope is not provided in the Practice Notes, WDs should bear in mind the characteristics of the NEC when drafting the Scope. In accordance with NEC clause

11.2(11), Scope is “information which either specifies and describes the *services* or states any constraints on how the *Consultant* Provides the Services”. It should present the *Employer’s* requirements on the *services* to be provided in a complete and precise manner. More guidance on the preparation of the Scope can be found in “How to write the PSC Scope” issued by Thomas Telford Limited. Examples of information to be included in the Scope are also covered by the “Scope” Section in the PSC Guidance Notes¹ published by Thomas Telford Limited. WDs should also make reference to the guidelines for consultancy brief for the traditional GCE form in AACSB/EACSB Handbook as appropriate.

C4.1.1.7 Some of the important points to note in preparing the Scope are:

(i) Clarity and effective project management

In drafting the Scope, WDs should bear in mind the need to state the requirements as clear as possible to avoid misinterpretation and unnecessary disputes. For example, the expressions such as “in the opinion of the *Employer*”, or “to the satisfaction of the *Employer*” should be replaced by more definitive standards or requirements as far as possible.

(ii) Payment methodology

The consultancy briefs for the traditional GCE form are drafted based on a price-based contract. However, for Option C which is cost-reimbursable based (i.e. Time Charge), some of the commonly used terms such as “...at the *Consultant’s* own cost”, etc. are no longer applicable.

(iii) Time for reply

As the *Employer* and the *Consultant* are required to reply within the *period for reply* unless otherwise stated in the contract according to NEC clause 13.3, the use of expressions such as “...within a reasonable time...” should be avoided.

activity schedule

C4.1.1.8 Under the traditional GCE form, the Schedule of Fees contains a pre-determined payment schedule setting out the percentages of the lump sum fee to be made by the *Employer* to the *Consultant* for achievement of different milestones. While for Options A and C commonly used in the NEC PSC pilot projects, *activity schedule* is used for pricing purpose.

C4.1.1.9 The *activity schedule* is a list of the activities which the *Consultant* needs to carry out in order to Provide the Services. The *activity schedule* is prepared and priced by the *Consultant* in his Fee Proposal. The *Consultant* is allowed to decide how to break up his work, services and actions into activities, enters them and prices each of them in the *activity schedule*. WDs should specify the minimum items of activities in the proforma for the *activity schedule* which shall not be deleted or amended by the *Consultant*. However, the *Consultant* is allowed to include additional activities to the proforma for the *activity schedule* as appropriate.

C4.1.1.10 To avoid front loading, WDs should specify the maximum and minimum limits for the sum of priced percentages of the tendered total of the Prices for certain groups of activities or certain phases in the proforma for the *activity schedule* as appropriate. Tenderers are allowed to provide comments on the specified maximum and minimum limits in the Expression of Interest (EOI) stage, during the pre-submission meeting and before finalisation of the proforma for *activity*

schedule in the Technical & Fee Proposals (T&F) stage. If WDs consider it necessary to specify any maximum limit(s) for different phase(s) deviating from those specified in the AACSB/EACSB Handbook, they should provide detailed justification(s) in the AACSB/EACSB submission(s) for the Board's reference.

C4.1.1.11 In the *activity schedule*, the activity descriptions identify the work, services and actions covered by the respective activities, but such descriptions may not be exhaustive. The exact nature and extent of an activity must be ascertained by reference to the contract, as not all requirements may be stated in the activity descriptions. The prices inserted against activities in the *activity schedule* are all-inclusive for executing, maintaining and completing such activities, including any incidental work, services and actions, unless expressly stated otherwise elsewhere in the *activity schedule*.

C4.1.1.12 For Option A, the *Consultant* will be paid for the completed activities according to the prices in the *activity schedule* since the Price for Services Provided to Date is developed with due regard to the completed activities without Defects which would delay immediately the following work. WDs should subdivide the principal activities into different items in the proforma for the *activity schedule* for better financing of the *Consultant*. For Option C, the prices in the *activity schedule* are used for assessing the target cost and the *Consultant's* share.

Compiling Contract Documents

C4.1.1.13 According to the Licence Agreement for NEC3 documents which can be found in the NEC Knowledge Management Platform in the Works Group Intranet Portal of the DEVB, authorised users are permitted to print out the NEC3 documents for their own business purposes. Nevertheless, WDs are reminded to observe the provisions in the Licence Agreement when using the Licensed Materials, in particular the provisions related to copyright. Owing to the copyright of NEC3 documents, WDs should not make copies of the NEC3 documents for inclusion in the tender or contract documents since the consultants may not be “other authorised users” as specified in the Licence Agreement.

C4.1.1.14 Further information on purchase of NEC contracts, guidelines or relevant publications can be found in this website: www.neccontract.com.

C4.2 GUIDELINES FOR CHOICE OF OPTION

C4.2.1 Main Options

C4.2.1.1 The four main Options of the PSC comprise:

- Option A - Priced contract with activity schedule
- Option C - Target contract
- Option E - Time based contract
- Option G - Term contract

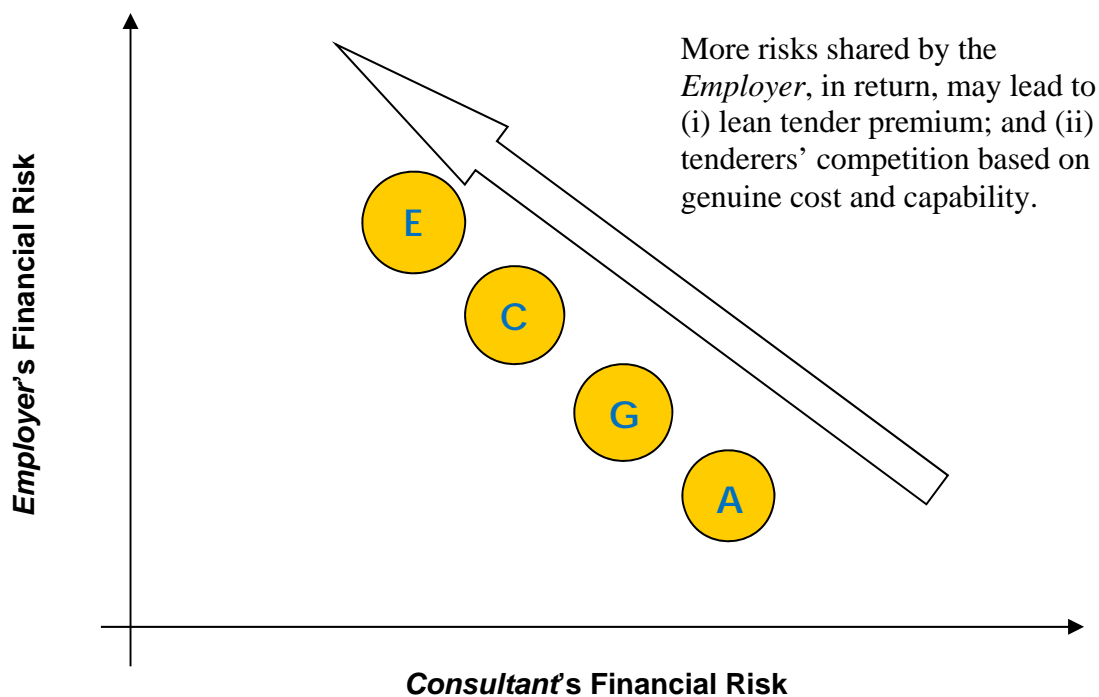
C4.2.1.2 The four main Options each:

- use a different payment arrangement; and
- allocate risk differently.

C4.2.1.3 The core clauses are used for definition of the contractual relationship. They apply to each of the four main Options and therefore do not influence the selection of the most appropriate main Option.

C4.2.1.4 Amongst those four main Options available in the PSC, at least one of them has to be selected for the payment mechanism and the risk sharing approach suitable for the project, followed by the selection of the Dispute Resolution Option (not applicable in Hong Kong) and the secondary Options.

C4.2.1.5 In general, the *Consultant* will carry the greatest financial risk under Option A and the least under Option E. A graphical risk presentation showing financial risk allocated between *Employer* and *Consultant* for different main Options is shown below:



C4.2.1.6 In selecting the appropriate main Option for projects, WDs should always take the project specific requirements into account in addition to the general features of the main Options. The Practice Notes mainly cover two main Options (viz. Options A and C) which have been adopted in the pilot trials in Hong Kong and are generally in line with the AACSB and EACSB Handbooks and technical circulars and circular memoranda issued by the DEVB. Their principal attributes are compared in the ensuing sections.

C4.2.2 Option Selection Considerations

C4.2.2.1 The main Options under the PSC cover most arrangements used in architectural and engineering consultancies. The table under Section C4.2.2.3 compares the two main Options (Options A and C) used in the pilot projects and generally in line with the current policies in terms of risk allocation and other factors affecting the final tendered total of the Prices.

C4.2.2.2 Option A is a priced contract and Option C is a target cost contract. Both of these contract forms use *activity schedule*.

C4.2.2.3 Time, cost and risks are generally considered to be the most important factors when selecting an appropriate main Option for the project. All two main Options include the similar time provisions and the essential differences between them are the risk sharing and payment mechanisms. Analysis and comparison of the characteristics of these main Options contribute to the considerations for selecting the appropriate main Option. Emphasis of the analysis should be placed on the suitability of the concerned main Options to the project taking into account the factors including but not limited to cost certainty, risk allocation and sharing, potentials to drive more efficient project delivery and cost savings, and resources available for open book accounting for target cost contracts.

	Option A	Option C
Opportunity for cost savings	Less incentive is provided to the <i>Consultant</i> to submit value engineering / cost saving solutions in delivery of consultancy services	More incentive is provided to the <i>Consultant</i> to submit value engineering / cost saving solutions in delivery of consultancy services
Comparison with GCE	Similar to GCE lump sum consultancies as the tendered total will only be amended if changes are instructed	Dissimilar to the GCE payment structure as the tendered total only provides the “target”
<i>Consultant</i> is paid for	Completed activities at tendered prices	“Time Charge” basis and the total amount to be paid to the <i>Consultant</i> is subject to the <i>Consultant</i> ’s share (the “pain/gain” share mechanism)
Financial risk	The financial risk of being able to Provide the Services at the agreed price is largely borne by the <i>Consultant</i>	The financial risk is shared by the <i>Employer</i> and the <i>Consultant</i> in an agreed proportion
Risk allowance and the tendered total of the Prices	Included by the <i>Consultant</i> in his tender are paid by the <i>Employer</i>	<i>Employer</i> pays for risks arising as actual cost, and risks allowed in the Prices are shared under pain/gain share mechanism

	Option A	Option C
Preparation of the <i>activity schedule</i>	The <i>activity schedule</i> is prepared by the <i>Consultant</i> and the <i>Consultant</i> carries the risk of errors in missing items, etc.	The <i>activity schedule</i> is prepared by the <i>Consultant</i> and the <i>Consultant</i> carries the risk of errors in missing items, etc. The “target” is not subject to adjustment for the <i>Consultant</i> ’s errors.
Changes to the Prices and price adjustment for inflation	Adjusted for compensation events and inflation	Adjusted for compensation events and inflation

C4.2.3 Justifications and Approval for Selected Main Option

C4.2.3.1 In selecting the main Option, considerations peculiar to a project including cost certainty, risk allocation and sharing, potentials to drive more efficient project delivery and cost savings, resources available for open book accounting for target cost contracts, etc. should be taken into account and evaluated.

C4.2.3.2 Option A shall be the default main Option. If WDs wish to adopt Option C, they should take note of the resources implication and devise mechanism for checking the staff payroll/timesheets. The justifications for the adoption of Option C shall be endorsed by an officer at D2 rank or above. If WDs wish to conduct trial of other main Options for appropriate projects, they should submit their proposal with justifications to seek approval from the DEVB who should consult the Inter-departmental Working Group on NEC Projects and/or the Steering Committee on NEC Projects as appropriate. [Updated as at 4 April 2023]

C4.2.4 Secondary Options

C4.2.4.1 The secondary Options can generally be used with all of the main Options although there are some exceptions (e.g. Option X5 “Sectional Completion” is not used with Option G).

C4.2.4.2 Similarly, the majority of the secondary Options may be used with one another in the same contract, although there is an exception for Option X20 “Key Performance Indicators” which is not used if Option X12 “Partnering” is included in the contract.

C4.2.4.3 The core clauses, which apply to all four main Options, and the main Option clauses for the main Option selected are mandatory and should be included in the contract unless express provisions are incorporated into the contract to amend or omit these clauses.

C4.2.4.4 The secondary Option clauses are included at the discretion of the *Employer* and none of them may need to be included in the contract, although this situation would be very unusual.

C4.2.4.5 The following considerations should be taken into account for inclusion of any secondary Options:

- whether it should be recommended for inclusion in the contract to achieve any project objectives or suit any project situations;
- whether there is any impediment to include it with the main Option recommended;
- whether there is any impediment to it being included due to other secondary Options recommended.

C4.2.4.6 In general terms, the recommendation of secondary Options should consider the prevailing Government procedures (e.g. requirements stipulated in the Stores and Procurement Regulations, the AACSB/EACSB Handbook, technical circulars and circular memoranda issued by the DEVB, departmental guidelines, etc.) adopted for GCE contracts (e.g. selection of X1 – Price adjustment for inflation, X10 – *Employer’s Agent* and X11 – Termination by the *Employer*, etc.) and project specific needs and current practice (e.g. selection of X5 – Sectional Completion, etc.).

C4.2.4.7 The secondary Options are designated as:

- ‘W’ Options
- ‘X’ Options
- ‘Y’ Options
- ‘Z’ Options

C4.2.4.8 The NEC provides two dispute resolution procedures, namely Options W1 and W2.

C4.2.4.9 Neither of these Options W1 and W2 was adopted in the pilot projects in Hong Kong and the Government’s framework of dispute resolution procedures was incorporated into the contracts as the *additional conditions of contract*. WDs should continue to follow the current framework unless prior legal advice has been obtained from LAD(W) of the DEVB and approval has been obtained from the DEVB who should consult the Inter-departmental Working Group on NEC Pilot Projects and/or the Steering Committee on NEC Pilot Projects where appropriate.

C4.2.4.10 The ‘X’ and ‘Y’ Options are set out in the NEC but are not mandatory. They may be selected and included in the contract if appropriate. ‘Y’ Options are used followed by a further prefix to denote the country. Hence, Y(UK) denotes secondary Options that are applicable to the United Kingdom (UK).

C4.2.4.11 The ‘Z’ Options are the *additional conditions of contract*. A library of standard *additional conditions of contract* (Z clauses) has been developed by the DEVB and is available in the NEC Knowledge Management Platform in the Works Group Intranet Portal of the DEVB.

‘X’ Options

C4.2.4.12 The common secondary Options used in the PSC contracts for public works projects in Hong Kong include:

- X1 – Price adjustment for inflation
- X5 – Sectional Completion
- X10 – *Employer’s Agent*
- X11 – Termination by the *Employer*

Option X1 – Price adjustment for inflation

C4.2.4.13 This secondary Option:

- is used when the *Employer* accepts the risk of inflation.
- requires an *index* to be defined in the Contract Data Part one.
- is executed in a similar manner to price adjustment under the traditional GCE form with reference to the Consumer Price Index (C) compiled by the Census and Statistics Department.
 - For Option A, the amount calculated for inflation is paid to the *Consultant*.
 - For Option C, the amount calculated for inflation is added to the “total of the Prices” (i.e. target cost).
- the assessed value of compensation events is first adjusted to the price level of the date on which this contract is due to commence (similar to the principle adopted for the traditional GCE form) before the price adjustment for inflation under this secondary Option.

C4.2.4.14 To align with the current practice, this secondary Option (for the scenario where the *staff rates* are fixed at the Contract Date and are not variable with changes in salary paid to individuals) (as amended by the Library of Standard Amendments to NEC PSC) was adopted in the pilot projects and should be required to be included in the PSC contracts for public works projects in Hong Kong.

Option X2 – Changes in the law

C4.2.4.15 This secondary Option:

- is used when the *Employer* accepts the risk of changes in the law.
- provides that a change in the law of the project is a compensation event if it occurs after the Contract Date.
- Either Party may notify the other of a compensation event for a change in the law.

C4.2.4.16 This secondary Option was not included in the pilot projects. Instead, the pilot projects normally included a list of related enactment, regulations, by-laws or rules in the Scope. Under this arrangement, the *Consultant* is not at risk if a material change in the law on the list occurs.

C4.2.4.17 To align with the current practice, this secondary Option should not be required to be included in the PSC contracts for public works projects in Hong Kong.

Option X3 – Multiple currencies

C4.2.4.18 This secondary Option:

- is used when the *Consultant* is to be paid in more than one currency and the *Employer* accepts the risk of a change in the exchange rate.
- is only used with Option A since under Option C the *Consultant* is paid in the currency in which he pays but his share are paid in the currency of the contract unless otherwise specified in the Contract Data Part one.

C4.2.4.19 This secondary Option was not included in the pilot projects.

C4.2.4.20 In any event the Contract Data Part one should stipulate that the currency of the contract is the Hong Kong Dollar and this provision has no relevance. As such, inclusion of this secondary Option should not be required.

Option X4 – Parent company guarantee

C4.2.4.21 This secondary Option:

- is used when the *Employer* requires additional security from the parent company of the *Consultant*.

C4.2.4.22 To align with the current practice, this secondary Option should not be required to be included in the PSC contracts for public works projects in Hong Kong.

C4.2.4.23 If WDs wish to conduct pilot trial to include this secondary Option in appropriate projects in particular for time critical contracts and/or large-scale contracts, and where the contract conditions impose a substantially higher degree of risk than normal on the *Consultant*, they should submit their proposal with justifications to seek legal advice from LAD(W) of the DEVB and approval from the DEVB who should consult the Inter-departmental Working Group on NEC Pilot Projects and/or the Steering Committee on NEC Pilot Projects where appropriate.

Option X5 – Sectional Completion

C4.2.4.24 This secondary Option:

- is used when the *Employer* requires any *section* of the *services* to be completed before the completion of the whole of the *services*.
- requires that *completion date* for each *section* of the *services* is stated in the Contract Data Part one.

C4.2.4.25 Delay damages and bonuses for early Completion can be related to sectional completion dates.

C4.2.4.26 This secondary Option was included in the pilot projects where Phase Subject to Incorporation was included. Therefore, this secondary Option should be required in the PSC contracts involving Phase Subject to Incorporation.

Option X6 – Bonus for early Completion

C4.2.4.27 This secondary Option:

- is used when the *Employer* wants Completion as early as possible and wishes to provide an additional incentive to the *Consultant* to achieve this target.
- is used for a *section* of the *services* or the whole of the *services*.
- requires the bonus rates to be stated in the Contract Data Part one.

C4.2.4.28 This secondary Option may be used in association with Option X5 “Sectional Completion”.

C4.2.4.29 If WDs wish to conduct pilot trial to include this secondary Option in appropriate projects, they should submit their proposal with justifications to seek comments/consent from relevant Government Bureau/Department, legal advice from LAD(W) of the DEVB and approval from the DEVB who should consult the Inter-departmental Working Group on NEC Pilot Projects and/or the Steering Committee on NEC Pilot Projects where appropriate.

Option X7 – Delay damages

C4.2.4.30 Delay damages are liquidated damages paid by the *Consultant* if he fails to complete the *services* or a section of the *sections* by the Completion Date.

C4.2.4.31 The daily rate for delay damages should be stated in the Contract Data Part one. This secondary Option may be used in association with Options X5 “Sectional Completion” and X6 “Bonus for early Completion”.

C4.2.4.32 To align with the current practice, this secondary Option should not be required to be included in the PSC contracts for public works projects in Hong Kong. If WDs wish to conduct pilot trial to include this secondary Option in appropriate projects, they should submit their proposal with justifications to seek comments/consent from relevant Government Bureau/Department, legal advice from LAD(W) of the DEVB and approval from the DEVB who should consult the Inter-departmental Working Group on NEC Pilot Projects and/or the Steering Committee on NEC Pilot Projects where appropriate.

Option X8 – Collateral warranty agreements

C4.2.4.33 This secondary Option requires the *Consultant* to enter into the collateral warranty agreements with third parties other than the Employer.

C4.2.4.34 To align with the current practice, this secondary Option should normally not be required to be included in the PSC contracts for public works projects in Hong Kong.

Option X9 – Transfer of rights

C4.2.4.35 This secondary Option allows the *Employer* to own the *Consultant's* rights over material prepared for the contract except as stated otherwise in the Scope.

C4.2.4.36 Clause B15 of the *additional conditions of contract* is related to the exclusive ownership of all material provided by the *Consultant*. To align with the current practice, this secondary Option should not be required to be included in the PSC contracts for public works projects in Hong Kong.

Option X10 – Employer's Agent

C4.2.4.37 This secondary Option allows the *Employer* to appoint an individual to act as its Agent under the contract. The Agent should be identified and the extent of his authority should be defined in the Contract Data Part one.

C4.2.4.38 Similar to the role of the Director's Representative in the traditional GCE form, this secondary Option (as amended by the Library of Standard Amendments to NEC PSC) was

adopted in the pilot projects and should be required to be included in the PSC contracts for public works projects in Hong Kong.

Option X11 – Termination by the *Employer*

C4.2.4.39 This secondary Option allows the *Employer* to terminate the appointment of the *Consultant* for a reason not stated in the contract which may involve no default of the *Consultant*.

C4.2.4.40 To align with the current practice, this secondary Option (as amended by the Library of Standard Amendments to NEC PSC) was adopted in the pilot projects and should be required to be included in the PSC contracts for public works projects in Hong Kong.

Option X12 – Partnering

C4.2.4.41 This secondary Option allows partnering between more than two parties working on the same project or on the provision of services.

C4.2.4.42 It is anticipated that majority of consultancy services for public works projects will mainly involve two Parties, the *Employer* and the *Consultant*, in the contract. Also, it may be difficult to define the details of partnering involving the future works contractor(s) at an early stage. This being the case this secondary Option is normally not required.

C4.2.4.43 If this secondary Option is adopted, the *Client's* objective, the Partnering information and the preliminary Schedule of Partners and Schedule of Core Group Members should be included in the Contract Data Part one. The Schedule of Partners and the Schedule of Core Group Members, like the Activity Schedule and other schedules referred to in the Contract Data, may change from time to time.

C4.2.4.44 If WDs wish to conduct pilot trial to include this secondary Option in appropriate projects, they should submit their proposal with justifications to seek comments/consent from relevant Government Bureau/Department on any proposed incentive payments, legal advice from LAD(W) of the DEVB and approval from the DEVB who should consult the Inter-departmental Working Group on NEC Pilot Projects and/or the Steering Committee on NEC Pilot Projects where appropriate.

Option X13 – Performance bond

C4.2.4.45 This secondary Option:

- is used when the *Employer* requires additional security on the *Consultant's* performance.
- is generally used when the contract stipulates desired tolerances or includes a performance specification.

C4.2.4.46 The provision of a performance bond would have a cost implication and this additional cost would not be recoverable if the *Consultant* achieved the necessary performance.

C4.2.4.47 This secondary Option is normally not required. However, it is anticipated to be included in time critical contracts and/or large-scale contracts, and where the contract conditions impose a substantially higher degree of risk than normal on the *Consultant*.

C4.2.4.48 If WDs wish to conduct pilot trial to include this secondary Option in appropriate projects, they should submit their proposal with justifications to seek comments/consent from relevant Government Bureau/Department on performance bond amount, legal advice from LAD(W) of the DEVB and approval from the DEVB who should consult the Inter-departmental Working Group on NEC Pilot Projects and/or the Steering Committee on NEC Pilot Projects where appropriate.

Option X18 – Limitation of liability

C4.2.4.49 Generally the Government does not accept any limitation of the *Consultant's* liability.

C4.2.4.50 To align with the current practice, this secondary Option was not included in the pilot projects and should not be required to be included in the PSC contracts for public works projects in Hong Kong.

Option X20 – Key Performance Indicators

C4.2.4.51 This secondary Option:

- is used to monitor and measure the *Consultant*'s performance against the Key Performance Indicators (KPIs) in the Incentive Schedule.
- is intended to incentivize the *Consultant* to meet the *Employer*'s objectives.
- This secondary Option is not used when Option X12 is used since Option X12 includes “KPI”.

C4.2.4.52 This secondary Option was not used in the pilot projects. If WDs wish to conduct pilot trial to include this secondary Option in appropriate projects, they should submit their proposal with justifications to seek comments/consent from relevant Government Bureau/Department on incentive payment amounts, legal advice from LAD(W) of the DEVB and approval from the DEVB who should consult the Inter-departmental Working Group on NEC Pilot Projects and/or the Steering Committee on NEC Pilot Projects where appropriate.

‘Z’ Options

C4.2.4.53 Further details on the ‘Z’ Options – *additional conditions of contract* are available in the library of the standard *additional conditions of contract* in the NEC Knowledge Management Platform in the Works Group Intranet Portal of the DEVB. If WDs propose to use new *additional conditions of contract* not shown in the standard library, they should submit their proposal with justifications to seek legal advice from LAD(W) of the DEVB and comments/consent from the DEVB if appropriate.

C4.3 ORGANISATION/ SET-UP OF THE TEAM FOR NEC CONTRACTS

C4.3.1 Roles and Responsibilities

C4.3.1.1 NEC sets out the roles and responsibilities of the *Employer*, *Employer's Agent* and *Consultant*. The duties of these parties are subject to amendments due to alternations or additions to the default contract provisions made in various parts of the contract documents, e.g. Schedule to the Memorandum of Agreement, *additional conditions of contract* (Z clauses), etc.

C4.3.1.2 Under the spirit of NEC, these parties are encouraged to work in a collaborative way. An effective communication channel has to be established as it is fundamental to joint and prompt problem solving when matters arise. Therefore, the *Employer's Agent* may consider drawing up a joint project organization chart with the *Consultant* at the beginning of the contract, with continuous updating by all parties, so that all project staff can identify easily the right person of the other parties whom he / she can discuss with when problems arise. Such practice can enhance the cooperation of the project team, and improve the efficiency in tackling problems.

C4.3.2 Delegation and Replacement of *Employer's Agent*

C4.3.2.1 NEC clauses X10.1 and 10.2 require the *Employer* to specify the extent of authority to be delegated to the *Employer's Agent* in the Contract Data and notify the *Consultant* of any replacement of the *Employer's Agent*.

C4.4 GUIDELINES FOR DETERMINATION OF PAIN/GAIN SHARE MECHANISM OF TARGET CONTRACTS

C4.4.1 Share Range and *Consultant's* Share Percentages

C4.4.1.1 Most pilot projects in Option C have adopted a simple 50:50 split for gain share and pain share allocation of the respective under spending and over spending for the *share range* up to 110% of the final target cost. For the *share range* less than or equal to 110%, the *Employer* inserted 50% into each of the *Consultant's share percentages* in the Contract Data Part one which results in every unit of under / over spending being equally shared between both Parties. This method is chosen if the *Employer* intends to share the risk of under / over spending equally between both Parties.

C4.4.1.2 The sliding scale of percentages model can be done by altering the simple 50:50 model whereby the *Employer* allocates increasing percentages of pain share / gain share between the Parties. There can be a number of different versions of this model. The most common is for the *Employer* to split the first 10% of over and under spending equally between the parties, and then alter the allocation above and below these percentages. Normally the *Employer* will increase the *Consultant's* pain share percentage in the bands above 110% of the final target cost to give the *Consultant* a greater share of the overspent, and similarly, the *Employer* will increase or decrease the *Consultant's* percentage gain share in the bands below 90% of the final target cost depending on the *Employer's* incentive approach in sharing the cost savings with the *Consultant*.

C4.4.1.3 Some employers have reversed this approach and have actually increased their exposure to pain share in increasing overspend brackets (i.e. over 110% of the final target cost). This is unusual but the rationale is that some larger employers are better capable of bearing the financial risk of overspent against the target cost and so would rather carry this risk than allocate it to the *Consultant*, who will seek to cover this risk somewhere in their target cost. However, since further review and more experience are required, this “reversed” approach is not recommended for the time being.

C4.4.1.4 The commonly adopted 50:50 split for gain share and pain share allocation of the respective under spending and over spending for the *share range* up to 110% of the final target cost is considered a fair approach. The advantages of the 50:50 model with pain *share range* cap at 110% of the adjusted final target cost are:

- Limited financial risk for the *Employer*
- Greater incentive for the *Consultant* to mitigate costs due to the final pain cap;
- Incentive is provided for the *Consultant* to innovate and to achieve more gain share.

C4.4.1.5 Nevertheless, WDs may adjust the recommended *share percentages* and / or the *share ranges* to suit their project needs. For any proposed pain / gain share mechanism deviating from the recommended 50:50 split with pain *share range* cap at 110% of the final target cost, WDs should submit their proposal with justifications to seek approval from the DEVB who should consult the Inter-departmental Working Group on NEC Pilot Projects and/or the Steering Committee on NEC Pilot Projects where appropriate.

C4.4.1.6 Below is a worked example of the 50:50 split with pain *share range* cap at 110% of the final target cost.

Worked Example

The relevant information in the Contract Data Part one is extracted below.

Consultant's share ranges and share percentages:

<u>share range</u>	<u>Consultant's share percentage</u>
less than or equal to 110%50..... %
greater than 110%100..... %

The total of the Prices (after taking into account all compensation events) at the Completion of the whole of the *services* is assumed as **HK\$10K**. The *Consultant's* share and final amount due for different scenarios are illustrated as follows:

a) Final PSPD	= HK\$7.5K
Saving under the total of the Prices	= HK\$2.5K
Comprising one increment:	
7.5K to 11.0K	= 2.5K @ 50% = HK\$1.25K
<i>Consultant's</i> share (paid by <i>Employer</i>)	= HK\$1.25K
Final amount due	= HK\$8.75K
b) Final PSPD	= HK\$9.5K
Saving under the total of the Prices	= HK\$0.5K
Comprising one increment:	
9.5K to 11.0K	= 0.5K @ 50% = HK\$0.25K
<i>Consultant's</i> share (paid by <i>Employer</i>)	= HK\$0.25K
Final amount due	= HK\$9.75K
c) Final PSPD	= HK\$11.5K
Excess over the total of the Prices	= HK\$1.5K
Comprising two increments:	
10.0K to 11.0K = 1.0K @ 50%	= HK\$0.5K
Greater than 11.0K = 0.5K @ 100%	= HK\$0.5K
<i>Consultant's</i> share (paid to <i>Employer</i>)	= HK\$1.0K
Final amount due	= HK\$10.5K

C4.5 PRE-TENDER ESTIMATE (PTE)

C4.5.1.1 Similar to the traditional GCE form, it is necessary to derive the PTE for PSC contracts based on the staff rates of previous similar contracts and other relevant market information.

C4.5.1.2 Likewise, in estimating the contingencies for PSC contracts, WDs may need to take into account any difference in allocation of financial risks for the compensation events between the traditional GCE form and the PSC form.

C4.5.1.3 WDs should take note of the comparison between the traditional GCE form and the PSC form below for the total fee components of the PTE for tender assessment in accordance with DEVB TC(W) No. 2/2016. Also, *expenses* such as non-staff costs should not be counted towards the tendered total of the Prices in the PSC form.

Traditional GCE Form	PSC Form
Lump sum fee	Tendered total of the Prices
Notional value for additional Services	Notional value for compensation events
Notional resident site staff on-cost charges	Notional resident site staff on-cost charges

C5 PRACTICE NOTES FOR TENDER STAGE

C5.1 BRIEFING TO POTENTIAL TENDERERS

C5.1.1.1 Tender briefings have been held in some pilot projects to facilitate tenderers' understanding of the PSC contracts, and points to note when preparing tenders.

C5.1.1.2 Tender briefings should be organized to facilitate tenderer's understanding of the submission requirements and the key features for the PSC contracts if considered appropriate. At the tender briefings, tenderers' attention should be drawn to:

- How to fill in the tender submissions
- Points to note in the Technical and Fee Proposals
- Tender documentation
- For target cost contracts, what the target cost is to cover
- Tender assessment methodology

C5.2 POINTS TO NOTE FOR TENDER ASSESSMENT

C5.2.1.1 The Technical Proposal and the Fee Proposal should be submitted in two separate sealed envelopes.

C5.2.1.2 The envelope for Technical Proposal should normally comprise:

- Technical Proposal
- Contract Data Part two (Section 1)
- other technical information, if any, as specified in the Guidelines for Preparation of Technical Proposals and the Invitation Letter for Submission of Technical and Fee Proposals

C5.2.1.3 The envelope for Fee Proposal should normally comprise:

- Contract Data Part two (Section 2)
- Priced *activity schedule*
- Annexes of Fee Proposal required in the proforma
- other financial information if any, as specified in the Guidelines for Preparation of Fee Proposal and the Invitation Letter for Submission of Technical and Fee Proposals

C5.2.1.4 Completion of the Contract Data Part two (Sections 1 and 2) in full is essential both to ensure a valid proposal and to eventually create a complete contract.

C5.2.1.5 If the Fee Proposal is submitted by a joint venture, all participants in the joint venture must sign the Fee Proposal.

Annexes of Fee Proposal

C5.2.1.6 The tendered total of the Prices in the Contract Data Part two (Section 2) should be equal to the total of the prices for all consultancy phases in Annexes of the Fee Proposal.

C5.2.1.7 The manning schedule in Annexes of the Fee Proposal should be completed for all consultancy phases. The adjusted staff rates and the *staff rates* for Option A and the *staff rates* for Option C quoted shall be all-inclusive rates.

Correction Rules for Tender Errors in Fee Proposal

C5.2.1.8 The standard correction rules for tender errors in the Fee Proposal for Options A and C are included in the Guidelines for Preparation of Fee Proposals available in the NEC Knowledge Management Platform in the Works Group Intranet Portal of the DEVB. If WDs wish to propose correction rules not in the standard library, they should submit their proposal with justifications to seek legal advice from LAD(W) of the DEVB and approval from the DEVB who should consult the Inter-departmental Working Group on NEC Pilot Projects and/or the Steering Committee on NEC Pilot Projects where appropriate.

Specified Percentage Range Requirement (Applicable to Option A)

C5.2.1.9 The “*staff rates*” in the Contract Data Part two (Section 2) can be different from the “adjusted staff rates” indicated in the manning schedule at Annexes of the Fee Proposal.

C5.2.1.10 For the purpose of checking the Specified Percentage Range requirement in accordance with Appendix D of DEVB TC(W) No. 2/2016, the “staff rate in lump sum fee” means the “adjusted staff rate in the tendered total of the Prices”, the “staff rate for additional Services” means the “*staff rate*” in the Contract Data Part two (Section 2) and the “total fee” of the staff group means the “amount in the tendered total of the Prices” for the concerned staff group.

C5.2.1.11 If the percentage difference between the “*staff rates*” and the “adjusted staff rates in the tendered total of the Prices” of any staff group exceeds the “Specified Percentage Range” of -10% to +40% as specified in DEVB TC(W) No. 2/2016, the tenderer’s submissions should not be considered further in the consultants selection exercise.

Combined Score Assessment

C5.2.1.12 Combined score assessment of Technical and Fee Proposals should be carried out in accordance with DEVB TC(W) No. 2/2016.

C5.2.1.13 The *staff rates* in the Contract Data Part two (Section 2) should be applied with the notional man-hours for compensation events to arrive at the “adjusted notional value for compensation events” to be used for purpose of the combined score assessment.

C5.2.1.14 The resident site staff on-cost rates in the Contract Data Part two (Section 2), if applicable, will be applied with the notional numbers of man-months of Resident Site Staff directly employed by the *Consultant* or Government staff posted to site by the *Employer* to arrive at the “notional resident site staff on-cost charges” to be used for purpose of the combined score assessment.

C5.2.1.15 For the purpose of the combined score assessment of Technical and Fee Proposals by adopting DEVB TC(W) No. 2/2016 only, “lump sum fee” means the “tendered total of the Prices” in the Contract Data Part two (Section 2) and “consultancy fee” means the sum of (i) the “tendered total of the Prices”, (ii) the “adjusted notional value for compensation events”, and if applicable, (iii) the “notional resident site staff on-cost charges”.

C6 PRACTICE NOTES FOR CONTRACT STAGE

C6.1 BUILDING UP A PARTNERING TEAM

C6.1.1.1 Under NEC, parties are required to work in mutual trust and collaborative manner. Good partnering spirit of the project team has to be built up gradually during the project development through joint efforts in resolving site problems and developing ideas for the project. This is the most difficult yet an essential element for a project to succeed.

C6.1.1.2 At the commencement of contract, WDs are encouraged to arrange with the *Consultant* a joint partnering workshop for establishing an effective communication channel, and setting up project common objectives. During the workshop, parties may also suggest some cost savings or innovative ideas to achieve the project objectives, making it another suitable occasion for adding value to the project, albeit other value management workshops may be conducted in planning / design stage as per ETWB TCW No. 35/2002 (now subsumed under Section 1.4.2 of Chapter 1 of PAH).

C6.1.1.3 In order to monitor and maintain the partnering relationship throughout the course of contract, the parties may also set up a “Steering Committee”, comprising members of management level of the project team, to regularly review the working relationship of their staff, and to propose improvement measures if any problem is identified.

C6.1.1.4 Good communication is the key to build up trust and teamwork. It is considered a good practice that the project team members consisting of the working level staff from the *Employer’s Agent, Consultant*, and perhaps the Subconsultants of key subconsulting packages, can have frequent discussions on the work progress and foreseeable problems in the working level meetings. This enhances cooperation among the team and can be a quick way to resolve the problems with all relevant parties sitting together. It is also advisable to have regular progress meetings to keep track of the *services* and more involvement from senior management are highly recommended to expedite the decision making process.

C6.2 CONTROL OF TIME

C6.2.1 Guidelines for NEC Project Management in Time and Risk

Communications

C6.2.1.1 Unlike the conventional contracts specifying the ways of communication (i.e. writing) in various provisions, NEC has a discrete provision clause 13 that defines the requirements on communication. Below are some key points on these requirements:

- (a) Under NEC clause 13.1, instruction, certificate, submission, proposal, record, acceptance, notification, reply and other communication which the contract requires is communicated in a form which can be read, copied and recorded. Writing is in the *language of the contract*.
- (b) NEC clause 13.2 stipulates that communication has effect when it is received.
- (c) To ensure timely responses to a communication by the *Employer* or the *Consultant*, NEC clause 13.3 requires these parties to reply to a communication within the *period for reply* unless otherwise stated in the contract. This requirement will be further addressed in the “Period for Reply” section below.
- (d) NEC clause 13.7 states that a notification which the contract requires is communicated separately from other communications. Under the PSC Guidance Notes¹, the intent for separated notification is to avoid important matters being missed.

Correspondence

C6.2.1.2 All communications are to be as clear and concise as possible. To avoid loss or confusion regarding written correspondence, all letters, faxes, reports, etc. should be referenced chronologically. They should be dated and addressed for the attention of an identified individual. Sub-titles identifying the subject of the correspondence are to be used as appropriate.

C6.2.1.3 Notification which the contract requires is communicated separately from other communications (NEC clause 13.7). Thus, the project team is encouraged to develop proformas for communication (e.g. instructions and notifications). The project team is reminded to state relevant NEC clauses in the communication, so that the recipient would be able to understand at once the context and authority under the contract for the action to be taken.

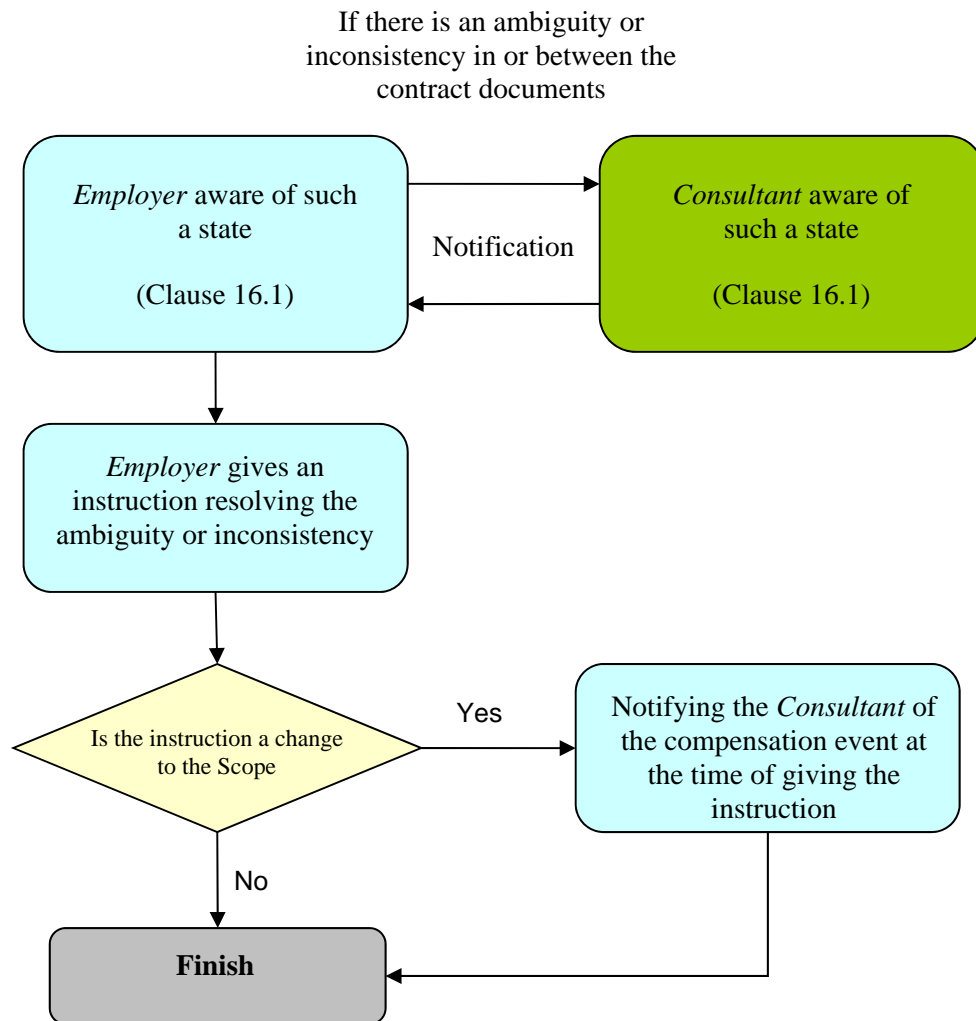
C6.2.1.4 Generally, all project correspondence should be retrievable and should be filed using a comprehensive filing register and be electronically backed up as appropriate.

Ambiguities and Inconsistencies

C6.2.1.5 There is no stated precedence of documents under the default NEC. If there are any ambiguities or inconsistencies in or between the contract documents, the *Employer* or the *Consultant* shall notify the other as soon as possible. The *Employer* has the responsibility of resolving the ambiguity or inconsistency in the documents (NEC clause 16.1). However, WDs should note that there is a standard amendment to this clause.

C6.2.1.6 The *Employer* may instruct a change to the Scope to resolve the ambiguity or inconsistency. Such an instruction is a compensation event provided it is covered by NEC clause 60.1(1).

C6.2.1.7 The process for resolving ambiguities and inconsistencies is summarised below.



Period for Reply

C6.2.1.8 To ensure timely communication, NEC has requirements on the response time from the Parties.

C6.2.1.9 Under NEC clause 13.3, if the contract requires the *Employer* or the *Consultant* to reply to a communication, he replies within the *period for reply* unless otherwise stated in the contract. Each party shall be aware of the *period for reply* as specified in the Contract Data Part one as such requirement cover types of communication stipulated under NEC clause 13.1, unless there is a specific response time stated in the contract including the amendments made in the Schedule to the Memorandum of Agreement and the *additional conditions of contract* clauses to suit the specific need of the project. If any aspects require a longer *period for reply*, WDs should specify the period in the Contract Data Part one or the Scope where appropriate.

C6.2.1.10 Under NEC clause 13.4, the *Employer* replies to a communication submitted or resubmitted to him by the *Consultant* for acceptance. If his reply is not an acceptance, the *Employer* states his reasons and the *Consultant* resubmits the communication within the *period for reply* taking account of these reasons. A reason for withholding acceptance is that more information is needed in order to assess the *Consultant's* submission fully. Withholding acceptance for a reason stated in the contract is not a compensation event (NEC clause 13.8).

C6.2.1.11 WDs should establish an effective communication channel in advance if they foresee the review or acceptance process for certain contract obligations would likely to exceed the response time stipulated in their contracts. Some of the typical examples would be meeting the time requirements under the contract (i) to reply to the *Consultant* on validity of the notified compensation event (NEC clause 61.4) and (ii) to reply to quotations submitted by the *Consultant* (NEC clause 62.3). For (i), the *Employer's Agent* may need to allow extra time for obtaining the *Employer's* confirmation on the validity of the notified compensation event after initial review by the *Employer's Agent*. For (ii), the *Employer's Agent* may need to allow extra time in seeking the view of the *Employer* and / or appropriate ranks of public officers or authority on the assessment of compensation events that have time and /or cost implications, particularly for cost significant compensation events. WDs should set reasonable time requirements for different scenarios as appropriate.

C6.2.1.12 For urgent compensation events which any delay of implementing it would inevitably affect the project time and cost, WDs are reminded to accord priority to it and to alert the senior management the time frame requirements under NEC when seeking views / obtaining approvals of such compensation events.

A6.1.1.13 Where necessary, the *Employer* may extend the *period for reply* to a communication if the *Employer* and the *Consultant* agree to the extension before the reply is due. The *Employer* shall notify the *Consultant* of the extension which has been agreed (NEC clause 13.5). The parties should also be aware of the provision on extension of time allowed for responses in individual sections, such as reply to quotations submitted by the *Consultant* under NEC clause 62.5.

Early Warning

C6.2.1.14 Early warning mechanism is one of the key procedures in the NEC to stimulate good project management. It encourages both the *Employer* and the *Consultant* to raise any event which may cause an impact to the project to the other party as soon as it is noticed. The successful implementation of the early warning mechanism hinges on the trusting relationship, and openness developed within the project team, which drive the parties to achieve their common project goals. If followed properly, the early warning mechanism gives an early opportunity for all parties to devise mitigation measures jointly and to select the best option.

C6.2.1.15 When risks are identified, either party shall alert another by giving an early warning. The processes begin and instead of fault-finding, the parties shall focus on resolving the risk, and take appropriate follow-up actions after risk reduction meeting. The question as to the responsibility or owner of the risk, which should be adequately set out in the contract, should not be the focus of discussion during the meeting. The contract mechanisms have been designed to ensure that:

- (i) The project team actively takes forward rigorous risk management, and
- (ii) The parties are financially motivated to manage risks successfully.

The general procedure of risk management under NEC is set out below.

Start-up of Risk Management Procedure

C6.2.1.16 Before executing the contract, both Contract Data Part one and Part two have to be completed by the *Employer* and the *Consultant* respectively. A section within both Contract Data Part one and Part two require a list of matters to be identified, that will be included in the Risk Register.

C6.2.1.17 The matters will be collated by the *Employer*, who will in turn transfer these onto the Risk Register. It is from this initial Risk Register that both Parties should proactively seek to manage and update should issues arise throughout the duration of the project.

Early Warning Notice

C6.2.1.18 Under NEC clause 15.1, either the *Consultant* or the *Employer* may give an early warning notice as soon as either becomes aware of any of the following:

- (i) An increase of the total of the Prices,
- (ii) A delay to Completion,
- (iii) A change to the Accepted Programme,
- (iv) A delay for meeting a Key Date,
- (v) An issue that might impair the usefulness of the *services* to the *Employer*, or
- (vi) An issue that might affect the work of the *Employer*, an *Employer's* contractor or another consultant.

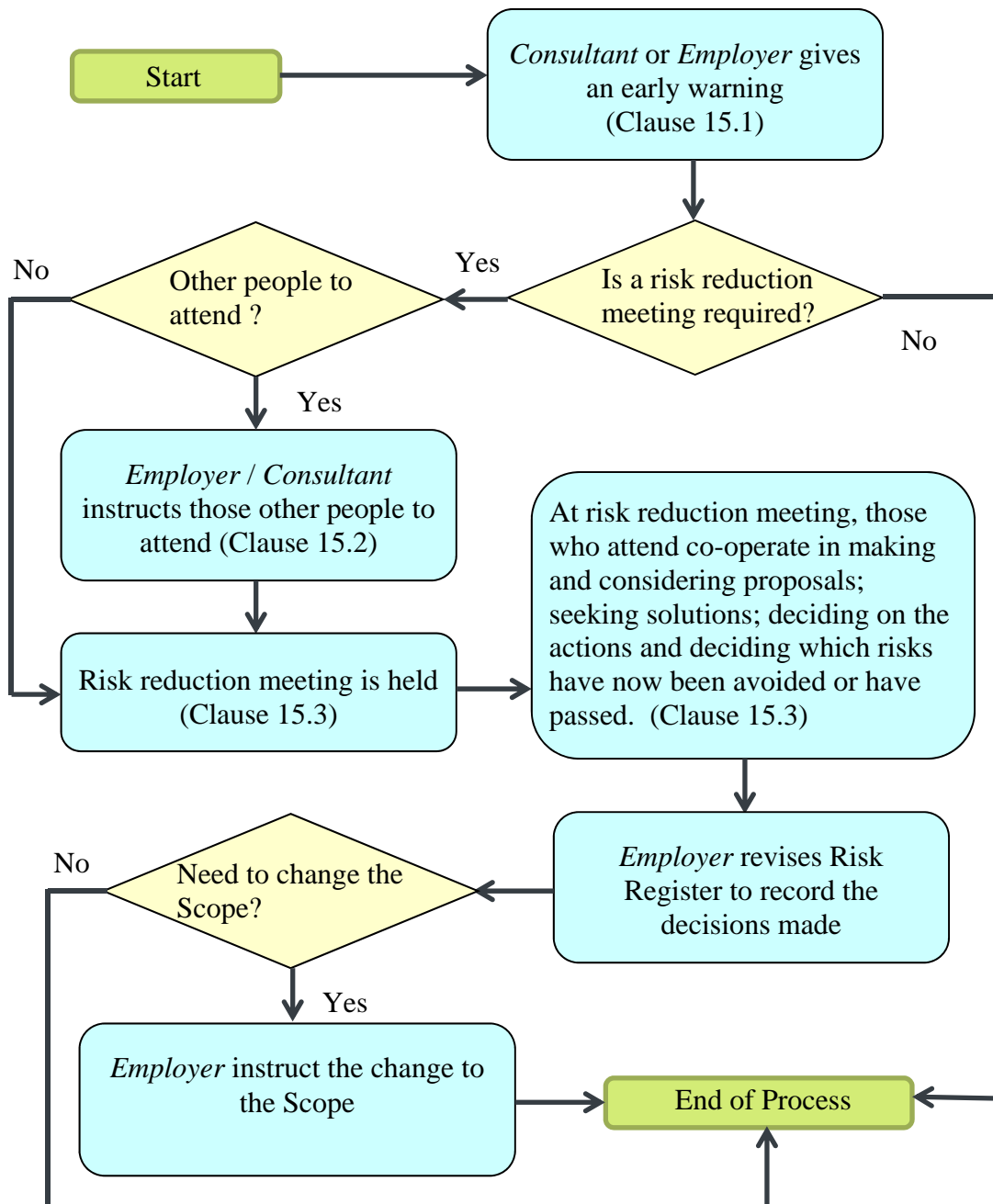
The *Consultant* may also give an early warning on any other matter which could increase his total cost.

C6.2.1.19 The purpose of the early warning is to maximize the time available for both the *Consultant* and the *Employer* to consider the implication of the matter and to take necessary actions to mitigate any potential consequences.

C6.2.1.20 It is important to note that an early warning notice is a contractual requirement. In accordance with the PSC Guidance Notes¹, early warnings may allow actions to be taken to reduce payment due to the *Consultant*. Should the *Consultant* fail to comply with this requirement, the *Employer* should notify the *Consultant* his decision that the early warning should have been given

(NEC clause 61.5) so that the *Consultant* knows the correct basis for his assessment including the sanction imposed for his failure to give early warning under NEC clause 63.5.

C6.2.1.21 After receipt of an early warning notice, the *Employer* may respond according to the process flow chart shown as below:



Risk Reduction Meeting

C6.2.1.22 NEC clause 15.2 states either the *Employer* or the *Consultant* may instruct the other to attend risk reduction meeting. Each may instruct other people to attend if the other agrees.

C6.2.1.23 Depending on the potential consequence of the risks, the risk reduction meeting will be chaired by the *Employer*/the *Employer's Agent* or his delegates and the attendees will include the *Consultant's* representatives and other people, who may be able to assist in solving the problem, agreed by both parties.

C6.2.1.24 If a decision needs a change to the Scope, the *Employer* instructs the change at the same time as he issues the revised Risk Register (NEC clause 16.4). If an early warning notice is considered to be a compensation event, the *Employer* will notify the *Consultant* of a compensation event and instruct the *Consultant* to submit a quotation, unless the event arises from a fault of the *Consultant* or the quotation has already been submitted (NEC clause 61.1).

Risk Register

C6.2.1.25 NEC clause 15.4 states that the *Employer* revises the Risk Register to record the decisions made at each risk reduction meeting and issues the revised Risk Register to the *Consultant*. The Risk Register is both a specified component of the NEC contractual framework and an output of risk management process.

C6.2.1.26 The Risk Register typically summarises the following key matters in tabular form:

- (i) Identified risks;
- (ii) Mitigating measure(s); and
- (iii) Action party

C6.2.1.27 The Risk Register is a “live” working document, used as a tool to manage the project pro-actively with a view to minimising the impact of risks on the project objectives. It is intended to be updated continually throughout the life of the project. This updating includes both the inclusion of new risk items and the review of previously identified risks. Risk items shall be reviewed periodically and in every risk reduction meeting, and they should be marked as “closed” if they have been removed or resolved and marked as “open” if agreed actions are being carried out. New risks are added to the Risk Register by the *Employer* when the *Employer* or the *Consultant* gives early warning of a potential risk event in accordance with NEC clause 15.1 each time.

C6.2.1.28 The Risk Register is an important tool for all the members of the project team as it affords all relevant parties an opportunity to make informed decisions on the project and make appropriate decisions on events which may have time and/or cost implications.

C6.2.1.29 To ensure the effective use of the Risk Register, it should be regularly reviewed and updated through the participation of all parties.

C6.2.1.30 The following illustrates a sample format of an NEC risk register:

Item No.	Date of Receipt of Early Warning	Issued by	Date of Risk Reduction Meeting(s)	Potential Problem(s) and the Risk(s)	Action to be taken to avoid/reduce the risk(s)	Action taken	Action by	Status (Open / Closed)

Proactive Risk Management

C6.2.1.31 NEC encourages early identification of problem and resolution of it in a collaborative manner. Therefore, WDs should take a proactive approach in working with the *Consultant* when risks are identified. Below sets out some recommended practices for proactive risk management:

- The parties should embrace the spirit of mutual trust and co-operation in dealing with early warnings. As long as the matter falls under the six bullet

points described in NEC clause 15.1, the *Consultant* and the *Employer* should deal with the early warning in a collaborative manner;

- In addition to being called following notification of early warning in respect of any newly identified risks, risk reduction meeting should be held on a regular basis (frequency to be adjusted to suit the specific project situations) to check whether risks can be closed or re-rated, and to review the status of mitigation measures or risk treatment action plans. During such meetings, subconsultants and other stakeholders can also be invited to join, as the parties may capitalise on their expertise in tackling the problems identified and minimizing the impact of the risks;
- The parties should bear in mind that during risk reduction meeting, they should focus on discussing viable solutions to avoid/reduce the risk, and to assign suitable party to carry out follow-up actions as required. To ensure good monitoring and timely completion of these follow-up actions, the parties should agree in the meeting a tentative action completion date;
- If the early warning leads to a change to the Scope, the *Employer* should notify the *Consultant* of a compensation event if covered by NEC clause 60.1(1) and instruct the *Consultant* to submit a quotation, unless the event arises from a fault of the *Consultant* or the quotation has already been submitted; and
- The parties should maintain a clear line of communications, and establish a highly efficient communication channels, such as the use of common mobile communication applications, so that risks or problems can be communicated in an effective way and solved as early as possible.

C6.2.2 Programme

Information to be included in the Programme

C6.2.2.1 NEC makes programme a significant document in the contract that imposes contractual obligations upon the parties to follow. The *Consultant* needs to include information on the programme as required under NEC clause 31.2.

C6.2.2.2 The *Consultant* should provide sufficient information to allow the *Employer* to make a decision whether to accept the programme. The *Employer* should exercise his own discretion in vetting the *Consultant's* programme thoroughly and in a pragmatic manner.

C6.2.2.3 Notwithstanding the above, it is recommended that discussion between the *Employer* and the *Consultant* should be facilitated before submission of programme by the *Consultant*. As a result, the parties will be aware of the key elements to be included in the submitted programme and will work collaboratively in the programme submission and acceptance processes.

Programme Submission and Acceptance

C6.2.2.4 The Accepted Programme is either (i) the programme identified in the Contract Data Part two or (ii) the latest programme accepted by the *Employer* (NEC clause 11.2(1)).

C6.2.2.5 For some projects, it may be useful to require the tenderers to submit a programme for tender assessment. However, it should be noted that such programme should normally not be regarded as the Accepted Programme under NEC clause 11.2(1). The *Consultant* is obliged under NEC clause 31.1 to submit a first programme to the *Employer* for acceptance. The programme submitted under tender may be made reference to when the *Consultant* prepares the first programme.

C6.2.2.6 The *Consultant* should within the period required under the Contract Data Part one submit a first programme for acceptance and the *Employer* should either accept the programme or notify the *Consultant* of his reasons for not accepting it (NEC clause 31.3). The *Employer* should note that a non-acceptance of the programme for reasons other than those listed in NEC clause 31.3 is a compensation event under NEC clause 60.1(8).

C6.2.2.7 If the programme does not satisfy the requirements under the contract, the *Employer* should refuse to accept the programme for reasons stated in NEC clause 31.3. The information required to be shown on each programme is extensive, comprehensive and generally acknowledged to be onerous.

C6.2.2.8 If, after several rounds of correspondence, the programme is still considered to be substandard, this would become an issue to project management as an Accepted Programme is not in place. To deal with this, the *Employer* may:

- Arrange joint meeting or workshop among the key staff who prepare and assess the programme. In the meeting or workshop, the key requirements in the programme should be highlighted, and the logic or sequencing of the programme should be elaborated to enhance understanding by the other party. The definitions of terms namely “float” and “time risk allowances” and their provisions in the programme should also be elaborated to ensure mutual understanding of their importance;
- Carry out the assessment of the programme with due consideration to the phases of the *services*. In large projects spanning across a considerable period of time, or complicated projects, it may not be practical for the *Consultant* to schedule a detailed plan and submit his “statements of how he plans to do the work” for all activities, especially those in the later stage which the detailed design is yet to be prepared. In this case, the *Employer* may take a pragmatic approach in assessing the programme. The *Employer* may request for a sub-programme showing detailed planning and programming of activities for a period, say, for coming three months to a year, and with other later activities shown with a minimum required level of details. If such sub-programme is considered practicable and realistic, the *Employer*

may accept this sub-programme with condition(s) for separate submission and acceptance of detailed planning and programming of later activities and the full programme may be accepted first and taken as an Accepted Programme if no major observation is identified;

- Identify certain key changes in an updated programme. For instance, if the programme is updated for compensation events having time impact only, information relevant to time aspects (i.e. planned Completion, float, time risk allowances, etc.) as required under NEC clause 31.2 would become essential changes to the programme. If there is a new compensation event having both time and cost implications, in addition to information on time listed under NEC clause 31.2, the programme has to cover more detail on how the *Consultant* plans to do the work that includes resources planned to be used.

C6.2.2.9 It should be noted that acceptance of a programme does not mean an acceptance of the quotation of a compensation event. For non-implemented compensation events, the *Consultant* should also show any effect due to these events in the programme. The *Consultant* may revise the planned Completion due to such non-implemented compensation events, and the *Employer* assesses whether the *Consultant's* programme is realistic or practicable. Acceptance by the *Employer* of the programme is not construed as the acceptance of the change to the Completion Date and / or the Key Date(s), which can only be changed after implementation of the said compensation events.

C6.2.2.10 It should also be noted that, without an Accepted Programme, the *Employer* will assess a compensation event by his own assessment as per NEC clause 64.2.

C6.2.2.11 If the *Employer* chooses not to accept the programme for reasons not listed under NEC clause 31.3, or if he does not reply within the stipulated time frame, then that would become a compensation event under NEC clause 60.1(8) or 60.1(6).

Programme Register

C6.2.2.12 As a good practice, it is recommended to develop a programme register for the project to record all programmes submitted by the *Consultant* during the course of the contract, the changes to Planned Completion and the Completion Date, and the approval status. It is primarily used for recording purposes and does not represent any formal acceptance or rejection of the programme.

Acceleration

C6.2.2.13 The *Employer* may instruct the *Consultant* to submit a quotation for an acceleration to achieve Completion before the Completion Date (NEC clause 34.1). This is the only mechanism under the contract that will bring the Completion Date forward.

C6.2.2.14 The *Consultant* shall submit the quotation or give his reasons for not doing so within the period for reply (NEC clause 34.2).

C6.2.2.15 There is no remedy if the *Consultant* does not produce such quotation or if the *Consultant's* quotation is unacceptable. Acceleration cannot be imposed on the *Consultant* without his agreement or consent. Unlike compensation event, the *Employer* cannot ask the *Consultant* to submit a revised quotation or make his own assessment of the *Consultant's* acceleration quotation.

C6.2.2.16 If the *Employer* wishes to bring a delayed Completion Date (due to compensation events) forward, the *Employer* should request the *Consultant* to submit quotation for compensation event and acceleration separately and assess the quotations in two-stages:

- (i) Assess the *Consultant's* compensation event quotation based on the reasonable additional resources and time to complete the work under the compensation event. The *Consultant* is obliged to mitigate the effect of a compensation event, e.g. to reschedule work at no cost or inefficiency to himself to optimise planned Completion, but not to accelerate. The *Employer* should make his own assessment for compensation event quotation as per NEC clause 64.

- (ii) Assess the *Consultant's* acceleration quotation. The *Employer* could only accept or reject the *Consultant's* quotation for acceleration. If the quotation is accepted, the Prices, the Completion Date and the Key Dates will be changed accordingly as per NEC clause 34.3.

C6.3 CONTROL OF COST

C6.3.0 NEC promotes effective project management, and one of the key aspects is on project cost. Common problems in administering the project cost, including payment to the *Consultant*, assessment of payment for target cost contracts, management of the Price for Services Provided to Date and the total of the Prices throughout the contract phases, would be discussed in the following sections.

C6.3.1 Payment to the *Consultants*

Option A

C6.3.1.1 Under the regime of Option A, payment made to the *Consultant* is based on the lump sum prices for each of the activities on the Activity Schedule which is the *activity schedule* priced by the *Consultant* unless later changed in accordance with the contract (NEC clause 11.2(14) and (18)). Payment under Option A is similar to milestone payment for each of the activities on the Activity Schedule. The Prices can be changed in accordance with the contract (e.g. compensation events and Option X1 - Price adjustment for inflation).

C6.3.1.2 In accordance with NEC clause 50.3, the amount due is:

- the Price for Services Provided to Date,
- the amount of the *expenses* properly spent by the *Consultant* in Providing the Services, and
- other amounts to be paid to the *Consultant* less amounts to be paid by or retained from the *Consultant*.

C6.3.1.3 For Option A, as defined in NEC clause 11.2(15), the Price for Services Provided to Date is the total of the Prices for the activities which have been completed. A completed activity is one which is without Defects which would delay immediately following work.

C6.3.1.4 Payment will only be made if the activity is completed. Unless there is a separate activity in the Activity Schedule, part payment will not be made under this main Option.

Option C

C6.3.1.5 Option C is a target cost contract and the *Consultant* is paid based on a cost reimbursable approach with a pain /gain share mechanism. The manner in which the pain / gain share will be split is outlined in the Contract Data Part one.

C6.3.1.6 The Activity Schedule is used to establish the total of the Prices (i.e. target cost) but is not used for payment. The Prices are the lump sum prices for each of the activities on the Activity Schedule unless later changed in accordance with the contract (e.g. the compensation events and Option X1 - Price adjustment for inflation).

C6.3.1.7 The fact that the *Consultant* shares in both the pain and the gain of any movement of the target cost is purported to encourage effective management control of the final Price for Services Provided to Date relative to the final target cost. The project team shall endeavour to control the Time Charge in order to maximise the gain share.

C6.3.1.8 In accordance with NEC clause 50.2 (as amended by the Library of Standard Amendments to NEC PSC), the amount due is:

- the Price for Services Provided to Date,
- the amount of the *expenses* properly spent by the *Consultant* in Providing the Services,
- other amounts to be paid to the *Consultant*, and
- less amounts to be paid by or retained from the *Consultant* including the *Employer's* interim assessment of the *Consultant's* share of the excess if the *Employer's* forecast of the final Price for Services Provided to Date is greater than his forecast of the final total of the Prices..

C6.3.1.9 For Option C, as defined in NEC clause 11.2(16), the Price for Services Provided to Date is the Time Charge for the work which has been undertaken. The Time Charge is the sum of the products of each of the *staff rates* multiplied by the total staff time appropriate to that rate properly spent on work in accordance with NEC clause 11.2(13). The *staff rates* are the rates inserted by the *Consultant* in the Contract Data Part two for different staff categories.

Payment Application

C6.3.1.10 Pursuant to NEC clause 50.1, the *Consultant* assesses the amount due and submits an invoice at each assessment date. However, if the *Consultant* wishes to submit invoices for remuneration for employment of Resident Site Staff at different date to suit the operation need, the *Consultant* should seek acceptance from the *Employer* on the proposed approach. In accordance with NEC clause 50.2, the *Consultant* needs to include the details stated in the Scope to show how the amount due has been assessed. Therefore, the Scope should include any information that the *Employer* requires from the *Consultant* with each invoice to enable him to check the invoice for correctness, such as time sheet for Option C, programme showing activities in progress or completed and their percentage of completion, etc.

Assessment and Certification of Payment

C6.3.1.11 The first assessment date is determined by the *Consultant* (NEC clause 50.1), preferably after discussion with the *Employer*. Under NEC clause 51.1, each payment is made within three weeks of receiving the *Consultant's* invoice or, if different period is stated in the Contract Data, within the period stated. A period of four weeks has been specified in the pilot projects.

C6.3.1.12 The Employer should check the supporting information for assessment of amount due, such as time sheet for Option C, programme showing activities in progress or completed and their percentage of completion, etc. Therefore, it is recommended to put in place a record keeping system for the time sheet and other payment application records. To minimise the risk of abuse in inflating the actual staff time spent for Option C, WDs should conduct checking and verification of the staff time spent against the actual services provided and the corresponding manpower input proposed in the Fee Proposal.

C6.3.1.13 If the *Employer* does not accept the *Consultant's* assessment of the amount due, he should notify the *Consultant* of his reasons and the amount due which he assesses and pay the amount of his assessment (NEC clause 51.3).

C6.3.1.14 In accordance with NEC clauses 52.1 and 52.2 (as amended by the Library of Standard Amendments to NEC PSC), the *Consultant* should keep accounts and records of his Time Charge and *expenses* and allows the *Employer* to inspect them at any time within working hours.

Late Payment and Corrected Payment

C6.3.1.15 Interest will be paid to the *Consultant* if there is late payment (NEC clause 51.4). As amended by the Library of Standard Amendments to NEC PSC, interest will not be paid for any corrected amount in a later certificate due to compensation events or other reasons.

C6.3.1.16 Under NEC clause 51.5, interest is basically calculated on a daily basis at the *interest rate* and is compounded annually. Amendments have been made in the Library of Standard Amendments to NEC PSC in relation to how interest should be calculated. As such, interest should be calculated at a simple interest rate according to the current practice.

Price Adjustment for Inflation

C6.3.1.17 Under NEC, price adjustment for inflation is under the secondary Option X1 that gives the flexibility to the *Employer* whether to allocate the risk of inflation to the *Consultant*.

C6.3.1.18 On each anniversary of the Contract Date, a price adjustment factor is calculated in a similar manner to price adjustment under the traditional GCE form with reference to the Consumer Price Index (C) compiled by the Census and Statistics Department. For Option A, the price adjustment amount calculated for inflation is paid to the *Consultant*. For Option C, the price adjustment amount calculated for inflation is added to the “total of the Prices” (i.e. target cost).

C6.3.1.19 For compensation events, the Time Charge assessed is adjusted to the Contract Date level before the price adjustment for inflation under this secondary Option.

Control for Expenses

C6.3.1.20 To align with the current practice for the traditional GCE form, the proposed *expenses* which the *Consultant* is allowed to necessarily and reasonably incur with third parties should be listed in the Contract Data Part one.

C6.3.1.21 WDs should include the details, estimated value and programme of individual items of *expenses* in the Scope. Also, they should make reference to the corresponding guidelines for “reimbursable items” for the traditional GCE form in the AACSB/EACSB Handbook as appropriate and include the requirements on fair and open procurement and management of these items in the Scope.

C6.3.1.22 If WDs consider that the arrangement of *expenses*, rather than through direct contract between the Government and the contractor/supplier in accordance with the Stores and Procurement Regulations, is more suitable for their contracts, they should also provide their deliberation and decision in the AACSB/EACSB submissions as appropriate.

C6.4 COMPENSATION EVENTS

C6.4.1 Grounds for compensation events

C6.4.1.1 Compensation events are events which may trigger the reassessment of the Prices, Completion Date and/or Key Dates. Under the NEC, the compensation events are listed under clause 60.1.

C6.4.2 Response Timeframe

Notifying Compensation Events

C6.4.2.1 Notification of compensation event is dealt with under NEC clause 61.

C6.4.2.2 Both the *Employer* and the *Consultant* should notify potential compensation event to each other based on clause 61.1 and 61.3.

C6.4.2.3 Clause 61.1 is a clear instruction to put the work “into effect” and the *Employer* instructs the *Consultant* to provide quotation at the same time. The *Consultant* should undertake the work that has been requested. Acceptance of quotation is not a prerequisite for the *Consultant* to undertake the work under the compensation event.

C6.4.2.4 Clause 61.2 is not a compensation event but an instruction to provide a quotation as the *Consultant* does not put the instruction into effect. The *Employer* can know the time and cost effect of the proposed instruction before he notifies a compensation event.

Notification of Compensation Event by the Consultant

C6.4.2.5 If the *Consultant* believes that the event is a compensation event but the *Employer* has not notified the event to the *Consultant*, the *Consultant* should notify the *Employer* a compensation event within eight weeks of becoming aware of the event. Otherwise, the *Consultant* will not be entitled for any compensation unless the event arises from the *Employer* giving an instruction, changing an earlier decision or correcting an assumption (NEC clause 61.3).

C6.4.2.6 After the *Consultant* submits the notification of compensation event, the *Employer* should decide if there are any changes to the Prices, the Completion Date and the Key Dates and notify the *Consultant* according to NEC clause 61.4 after applying the following four point tests:

- (i) whether the event arises from the fault of the *Consultant*;
- (ii) whether the event has happened and is not expected to happen;
- (iii) whether the event has any effect upon the *Consultant*'s costs, Completion or meeting a Key Date; or
- (iv) whether the event is one of the compensation events stated in the contract.

C6.4.2.7 If the *Employer* considers the event is not a compensation event, the *Employer* should give brief explanation of his decision. If *Employer* considers the event is a compensation event, the *Employer* notifies his decision to the *Consultant* and, if his decision is that the Prices, the Completion Date or the Key Dates are to be changed, request the *Consultant* to submit quotation for the work in relation to the compensation event.

C6.4.2.8 If the *Employer* does not notify his decision to the *Consultant* within two weeks (as amended in the Library of Standard Amendments to NEC PSC) of the *Consultant*'s notification or a longer period to which the *Consultant* has agreed, the *Consultant* may notify the *Employer* of his failure. The *Employer* should notify his decision to the *Consultant* within further two weeks of that notification or a longer period to which the *Consultant* has agreed (as amended in the Library of Standard Amendments to NEC PSC). If not, the notification is treated as acceptance by the *Employer*'s silence (NEC clause 61.4).

C6.4.2.9 It is essential for the *Consultant* to indicate the order (not exact quantum) of time and cost implication in his notification for compensation event in order to facilitate the *Employer*'s *Agent* to seek the agreement of the *Employer* or appropriate authority if the cost estimate for the compensation event to be issued is over his assigned authority, the *Consultant* should clearly state his ground in his notification for compensation event or discuss with the *Employer*'s *Agent* before issuing the notification to avoid time-consuming exchange of correspondences.

C6.4.3 Assessment of Cost

C6.4.3.1 Under NEC clause 63.1, the changes to the Prices are assessed as the effect of the compensation event upon:

- the actual Time Charge for the work already done and
- the forecast Time Charge for the work not yet done.

C6.4.3.2 While assessing the cost, the *Employer* should be aware of the requirement under NEC clause 63.6 that assessment of the effect of a compensation event includes risk allowances for cost and time for matters which have a significant chance of occurring. As such, the *Employer* has to assess whether the risks allowed by the *Consultant* are appropriate. If it is assessed as appropriate and the quotation is subsequently accepted, the Prices, Completion Date, and / or Key Dates will be adjusted and could not be changed afterwards even if the risks allowed for have not been materialized.

C6.4.3.3 Under Option C, implemented compensation events will adjust the Prices (i.e. target cost), rather than the Prices for Services Provided to Date (i.e. actual payment), and affect the sharing of pain/gain by the Parties from a cost perspective.

Quotation for Compensation Events

C6.4.3.4 A quotation is the *Consultant's* assessment of the time and monetary effects of a compensation event (NEC clause 62.2).

C6.4.3.5 There are three instances in which the *Employer* may instruct the *Consultant* to submit quotations in relation to compensation events:

- The *Employer* instructs the *Consultant* to submit quotations for a compensation event at the same time he notifies the compensation event under NEC clause 61.1.

- The *Employer* instructs the *Consultant* to submit quotations for a compensation event once he has decided that an event notified by the *Consultant* has passed the four-point test under clause NEC 61.4.
- The *Employer* instructs the *Consultant* to submit a revised quotation for a compensation event under NEC clause 62.4.

C6.4.3.6 Quotations for compensation events comprise (NEC clause 62.2):

- proposed changes to the Prices;
- any delay to the Completion Date and Key Dates;
- details of the *Consultant's* assessment; and
- alternations to the Accepted Programme if applicable.

C6.4.3.7 The *Consultant* should submit quotations for compensation events within two weeks upon receipt of the *Employer's* instruction (NEC clause 62.3).

C6.4.3.8 The *Consultant* always gets the first chance at assessing the compensation events. Only under the circumstances listed under NEC clause 64.1, the *Employer* will assess a compensation event.

C6.4.3.9 Under NEC clause 64.2, the *Employer* assesses a compensation event using his own assessment of the programme of the remaining work if

- there is no Accepted Programme or
- the *Consultant* has not submitted a programme or alterations to a programme for acceptance as required by the contract.

C6.4.3.10 Pursuant to NEC clause 64.3, the *Employer* notifies the *Consultant* of his assessment of a compensation event and gives him detail of it within the period allowed for the *Consultant*'s submission of his quotation for the same event. This period starts when the need for the *Employer*'s assessment becomes apparent. The PSC Guidance Notes¹ explains that this clause provides for the *Employer* to have the same time to make his assessment as the *Consultant* was allowed for this.

C6.4.3.11 If the *Employer* does not reply to a quotation within the time allowed, the *Consultant* has to write "second notification" highlighting the failure of the *Employer* to respond to the first notification. If the *Employer* fails to respond to the "second notification", the quotation is treated as acceptance by the *Employer* (Clause 62.6).

Implementation of Compensation Events

C6.4.3.12 The implementation of compensation events represents the formal conclusion of the administrative process. Implementation of compensation event takes place when (NEC clause 65.1):

- (a) the *Employer* notifies his acceptance of the *Consultant*'s quotation;
- (b) the *Employer* notifies the *Consultant* of his own assessment; or
- (c) the *Consultant*'s quotation is treated as having been accepted by the *Employer*.

C6.4.3.13 Once the compensation event is implemented, the Prices (e.g. target cost for Option C) should be updated and/or the Completion Date and Key Dates should be updated in programme. The changes to Prices, Completion Date and/or Key Dates due to an implemented compensation event may be changed due to change of assumptions stated by the *Employer* in the compensation events later under NEC clause 61.6, such as the notional number of man-hours assumed for those compensation events implemented on a time-charge basis.

C6.4.4 Assessment of Time

C6.4.4.1 NEC stresses the contractual importance of the Accepted Programme and requires the *Consultant* to show the requirements under NEC clause 31.2 for acceptance by the *Employer*. Attention shall be drawn to the following provisions while assessing compensation events with time effect:

- NEC clause 63.3 - A delay to the Completion Date is assessed as the length of time that, due to the compensation event, planned Completion is later than planned Completion as shown on the Accepted Programme.
- NEC clause 63.6 - Assessment of the effect of a compensation event includes risk allowances for cost and time for matters which have a significant chance of occurring and are at the *Consultant's* risk under the contract.

Programme Update

C6.4.4.2 If the programme for remaining work is altered by a compensation event, the *Consultant* should include the alterations to the Accepted Programme in his quotation for the *Employer's* consideration and the *Employer* will notify the *Consultant* of any necessary adjustment to the Completion Date and/or Key Dates (NEC clause 62.2 and 65.3).

Changes to Activity Schedule

C6.4.4.3 If the *Consultant* changes a planned method of completing the *services* so that the Activity Schedule does not comply with the Accepted Programme, the *Consultant* should submit a revised Activity Schedule to the *Employer* for acceptance (NEC clause 53.2). For Option A, the payment will follow the adjusted Activity Schedule. For Option C, the changed Activity Schedule, which takes account of the effect of the compensation event, is used for the assessment for changed Prices (NEC clause 63.14).

C6.5 CONTROL OF QUALITY

C6.5.1 Consultant's Performance Report

C6.5.1.1 The management and reporting of the consultants' performance should follow the Development Bureau Technical Circular (Works) No. 3/2016.

C6.5.2 Quality Management

C6.5.2.1 The operation and certification of the quality management system should comply with the requirements as stipulated in NEC clause 40 and clause B13 and B14 of the *additional conditions of contract*. The *Consultant* should provide the *Employer* the quality policy statement and the quality plan for acceptance in accordance with NEC clause 40.2.

C6.5.3 Defects and Rectification

C6.5.3.1 NEC clause 41 sets out the basic obligations of the parties. Below are brief descriptions of some clauses related to Defects and their rectification.

Defects

C6.5.3.2 As defined in NEC clause 11.2(5), a Defect is a part of the *services* which is not in accordance with the Scope or the applicable law.

C6.5.3.3 Essentially it refers to the defects which are in some way the fault of the *Consultant* and for which the *Consultant* is contractually responsible. Completion may still occur even when there are Defects that have been notified to the *Consultant* provided that these notified Defects would not prevent the *Employer* from using the *services* and Others from doing their work according to NEC clause 11.2(2). Also, for the state of Completion, WDs should consider to state in the Scope all the work necessary to be completed for the *Employer* to use the *services* and for Others to do their work so as to better define the state of Completion.

Defects Date

C6.5.3.4 It is a date to be determined from a period entered by the *Employer* in the Contract Data Part one. It is normally set at twelve months after Completion of the whole of the *services* or another appropriate date to suit the project specific need. Until the *defects date*, the *Employer* and the *Consultant* should notify each other of each Defect as soon as they find it. The *Employer's* rights in respect of a Defect which the *Employer* has not found or notified by the *defects date* are not affected in accordance with NEC clause 41.1.

Defect Correction Period

C6.5.3.5 It is a time to be required by the contract within which the *Consultant* should rectify a notified Defect so as to minimize the adverse effect on the *Employer* or Others. The *defect correction period* is normally set at twelve weeks or another appropriate periods for different types of Defects to suit the project specific need.

Correcting Defects

C6.5.3.6 As required under NEC clause 41.2, the *Consultant* is responsible for correcting all Defects, whether notified or not, within the *defect correction period*.

C6.5.3.7 The *Employer* has to be aware that, under Option C, the staff time properly spent on rectifying Defects before Completion forms a part of the Time Charge. The exceptions to this are listed in the second to fifth bullet points of NEC clause 11.2(13) (as amended in the Library to Standard Amendments to NEC PSC). One point to note is that this provision is intended to incentivize the parties to search for Defects and correct them before Completion.

Uncorrected Defects

C6.5.3.8 NEC clause 41.2 also states the procedure if the *Consultant* fails to correct a Defect. In brief, if the *Consultant* fails to rectify a notified Defect within the *defect correction period*, he should pay the cost to the *Employer* of engaging third parties to do so.

C6.6 NEC PERFORMANCE MONITORING

C6.6.1 Standard forms have been designed by the DEVB for the Project Officers to input the data of the PSC contracts in respect of cost and time aspects. Regular return will be called by the DEVB on a quarterly basis to collect data for monitoring the performance of the PSC contracts. The concerned data will be input and retrieved through the Public Works Project Information System (PWPIS) after completion of system upgrade in 2017 tentatively.

C7 KNOWLEDGE SHARING AMONG NEC USERS

C7.1 At present, there are several committees in the DEVB / WDs in relation to the adoption of NEC in public works projects:

- Steering Committee on NEC Pilot Projects (meeting on a need basis) :
To oversee the implementation and steer the direction (chaired by PAS(W)4, DEVB)
- Inter-departmental Working Group on NEC Pilot Projects (meeting on a need basis) :
To co-ordinate and advise WDs on matters relating to NEC (chaired by CAS(W)7, DEVB)
- Departmental NEC Working Group or equivalent (meeting regularly / on a need basis) :
To support the use of NEC within individual departments. Members involve staff from WDs adopting NEC (chaired by D1/D2/D3 officers in WDs)

C7.2 In view of the wider use of the PSC contracts, it would be beneficial if knowledge sharing could be done in a coordinated manner to facilitate WDs' preparation for the PSC contracts, and to ensure a more consistent approach for all PSC contracts. In addition, after issuing the Practice Notes, feedbacks or comments from users are expected. To this end, the Inter-departmental Working Group on NEC Pilot Projects is proposed to be a knowledge exchange platform for further development or refinement of the Practice Notes in a medium term.

C7.3 The Practice Notes take into account the relevant Special Conditions of Employment, Schedule of Fees, Guidelines for Preparation of Technical Proposal and Fee Proposal Proforma of the GCE form promulgated under various technical circulars and circular memoranda issued by the DEVB and updates them to suit the PSC form. The tender and contract provisions promulgated under the Practice Notes replace those provisions appearing in these publications to the extent that the latter are relevant to the PSC contracts. For any ambiguity, WDs should address to the DEVB who should consult the Inter-departmental Working Group on NEC Pilot Projects and/or the Steering Committee on NEC Pilot Projects where appropriate. The Practice Notes are living documents which will be updated from time to time when new technical circulars are promulgated or the existing works policies are fine-tuned which may affect the contents of the Practice Notes.

REFERENCE

1. Thomas Telford Ltd. (2013), NEC3 Professional Services Contract Guidance Notes
2. Thomas Telford Ltd. (2013), NEC3 Professional Services Contract (April 2013)

Remarks:

- (i) “NEC clause” in the Practice Notes refers to a clause in the appropriate document(s) of reference (2) above.