

## **Chapter III**

### **Preparation of Bill of Quantities**

(including Preambles to Bill of Quantities)

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## Preparation of Bill of Quantities

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<b>Sub-division of Bill of Quantities</b>	<b>1</b>	The Bill of Quantities is to be divided as appropriate into separate levels of identification, in the sequence set down in Table 1.			
<b>Quantities</b>	<b>2</b>	Quantities shall be expressed in whole numbers except for units of measurement of tonnes and hectares in which case the quantities shall be to three decimal places.			
<b>Units of Measurement</b>	<b>3</b>	The following abbreviations shall be used for the units of measurement:			
		<b>Unit</b>	<b>Abbreviation</b>	<b>Unit</b>	<b>Abbreviation</b>
		millimetre	mm	sum	sum
		metre	M	number	no
		square millimetre	mm <sup>2</sup>	hour	hr
		square metre	M <sup>2</sup>	week	wk
		hectare	ha	item	iem
		cubic metre	M <sup>3</sup>	vehicle week	v.wk
		kilogram	kg	man hour	man hr
		tonne	T	vehicle day	v. day
		day	day	operative day	op. day

## **Special Preliminary Items**

4 Provision is made in Table 1 for the inclusion of “Special Preliminary” items in the Bill of Quantities.

“Special Preliminary” items are not included in Chapter IV Units and Method of Measurement as their use is intended to be restricted and particular to a given Contract.

“Special Preliminary” items shall not be used for Temporary Works, cofferdams, accesses, advance operations and the like unless the work or operation is unusual in relation to the Works, and:

- a) the magnitude of such work, not separately measured, is such as to be disproportionately high in cost in relation to the measured work with which it is associated; or
- b) an operation, not separately measured, is required to be executed far in advance or after the main measured operation to which it relates.

The inclusion of “Special Preliminary” items in a Contract shall be entirely at the discretion of the Overseeing Organisation. Whether a “Special Preliminary” item is included in the Bill of Quantities or not shall in no way relieve the Contractor of his obligations under the Contract.

**Alternative Pavement**      **Types of**      **5** Where the Contract provides for the tenderer to select the Type of Pavement to be constructed from a range of alternatives a separate Bill of Quantities is to be provided within Series 600 : Earthworks, of the Roadworks General Bill; and Series 700 : Pavements, of the Main Carriageway, Interchanges and Side Roads Bills as appropriate, for each Type of Pavement permitted by the Contract.

Each of the individual Bills of Quantities within Series 600 of the Roadworks General Bill and in Series 700 of the Main Carriageway, Interchanges and Side Roads Bills as appropriate, is to be based on the thinnest pavement permitted by the Contract for the particular Type of Pavement to which it refers.

Immediately preceding the separate sets of alternative Bills in Series 600 : Earthworks and Series 700: Pavements respectively an Index (Table 2) is to be provided of the Types of Pavement permitted by the Contract.

Provision is to be made for only the one Bill of Quantities in Series 600 of the Roadworks General Bill and in Series 700 of the Main Carriageway, Interchanges and Side Roads Bills as appropriate which relates to the Type of Pavement elected to be constructed by the Contractor, to be priced and included in the Tender Total.

**Alternative Types of 6  
Safety Fence**

Where the Contract provides for the tenderer to select either wire rope safety fence or tensioned corrugated beam safety fence to be constructed over given lengths, separate Bills of Quantities are to be provided containing alternative types of safety fence for the lengths in question. These Bills of Quantities are to be included within Series 400: Safety Fences, Safety Barriers and Pedestrian Guardrails.

Immediately preceding the separate alternative Bills in Series 400 an Index (Table 3) is to be provided for the alternative types of safety fence permitted by the Contract.

Provision is to be made for only the one Bill of Quantities in Series 400 of the Roadworks General Bill which relates to the type of safety fence elected to be constructed by the Contractor to be priced and included in the Tender Total.

**Structures Where a 7  
Choice of Designs is Offered**

Where the Contract provides for a structure designed by the Contractor to be constructed as an alternative to the structure which has been designed by the Overseeing Organisation, a separate Bill of Quantities is to be provided for each of the two construction procedures permitted by the Contract.

Each of the two individual Bills of Quantities is to be provided in accordance with the various Chapters and Series of the Method of Measurement for all the works contained within the Designated Outline (with the exception of those works scheduled as not to be included). For the structure designed by the Contractor the Bill of Quantities is to comprise a single item in accordance with Series 2500. The Bill for the structure designed by the Overseeing Organisation is to be compiled in accordance with the appropriate Series. Those works scheduled as not to be included in either of these alternative Bills of Quantities shall be included by the Overseeing Organisation in other Bills compiled in accordance with the appropriate Series.

Provision is to be made for only the one Bill of Quantities which relates to the form of construction elected to be constructed by the Contractor to be priced and included in the Tender Total.

Immediately preceding the separate alternative Bills of Quantities an Index (Table 4) is to be provided for the alternative forms of construction permitted by the Contract.

**Structures Designed 8 by the  
Contractor**

Where the Contract provides only for a structure designed by the Contractor to be constructed a Bill of Quantities comprising a single item for all the works within the Designated Outline (with the exception of those works scheduled as not to be included) is to be provided in accordance with Series 2500. Those works scheduled as not to be included in this single item are to be included by the Overseeing Organisation in other Bills compiled in accordance with the appropriate Series. Earthworks within the Designated Outlines shall not be included in the Earthworks Schedules.

**Landscape and Ecology**

**9** Where the Contract includes for Landscape and Ecology a separate Bill of Quantities shall be provided within the Roadworks Bill as set down in Table 1.

Payments for new planting, seeding and turfing measured in accordance with Series 3000 paragraphs 6 to 13 inclusive shall be subject to staged payments as set out in Table 5 which shall be completed by the compiler. This table shall be inserted immediately preceding the Collection page for the separate Bill of Quantities for Landscape and Ecology.

**Preambles to Bill of Quantities**  
**10**

The matters set out under the heading “Preambles to Bill of Quantities” (1-18) hereafter are always to be included as a Preamble to the Bill of Quantities. Additional numbered Preambles may be included as necessary. Amendments to the Method of Measurement are to follow paragraph 20 (see notes to compiler).

**Table 1**

LEVEL 1 DIVISION	LEVEL 2 CONSTRUCTION HEADING	LEVEL 3 MMRW SERIES HEADINGS	NOTES
(i) Preliminaries	Preliminaries	100 Preliminaries	Special Preliminaries Should be inserted under level 3
(ii) Roadworks	Roadworks general	200 Site Clearance 300 Fencing 400 Safety Fences, Safety Barriers and pedestrian Guardrails 600 Earthworks	Goetechnics and Hedgebanks and the like should be inserted under level 3 Series 600
	Main Carriageway	500 Drainage and Service Ducts 700 Pavements 1100 Kerbs, Footways and Paved Areas	Police observations platforms, cycle tracks, and the like should be inserted under level 3 Series 1100
	Interchanges	500 Drainage and Service Ducts 700 Pavements	Cycle tracks and the like should be inserted under level 3 Series 1100
	Side Roads	500 Drainage and Service Ducts 700 Pavements 1100 Kerbs, Footways and Paved Areas	Cycle tracks and the like should be inserted under level 3 Series 1100
	Signs, Motorway Communications and Lighting	1200 Traffic Signs and Road Markings 1300 Road Lighting Columns, Brackets and CCTV Masts 1400 Electrical Work for Road Lighting and Traffic Signs 1500 Motorway Communications	
	Landscape and Ecology (05/01)	3000 Landscape and Ecology	

LEVEL 1 DIVISION		LEVEL 2 CONSTRUCTION HEADING	LEVEL 3 MMRW SERIES HEADINGS	NOTES
DIVISION	SUB-DIVISION			
(iii) Structures	Structure in form of Bridge or Viaduct; Name or Reference	Special Preliminaries		Special Preliminaries should be inserted as a separate construction heading under level 2
		Piling	1600 Piling and Embedded Retaining walls	
		Substructure – End Supports	500 Drainage and Ducts 600 Earthworks 1100 Kerbs, Footways and Paved Areas 1700 Structural Concrete 1800 Structural Steelwork 1900 Protection of Steelwork. Against Corrosion 2300 Bridge Expansion Joints and Sealing of Gaps 2400 Brickwork, Blockwork and Stonework	
		Substructure-Intermediate Supports Substructure – Main Span Substructure – Approach Spans	As for End Supports	To include piers and columns



LEVEL 1 DIVISION		LEVEL 2 CONSTRUCTION HEADING	LEVEL 3 MMRW SERIES HEADINGS	NOTES
DIVISION	SUB-DIVISION			
		Superstructure – Main Span Superstructure – Approach Spans Superstructure – Arch Ribs	500 Drainage and Service Ducts 1700 Structural Concrete 1800 Structural Steelwork 1900 Protection of Steelwork Against Corrosion 2100 Bridge Bearings 2300 Joints and Sealing of Gaps 2400 Brickwork, Blockwork and Stonework	
		Finishings	400 Safety Fences, Safety Barriers And Pedestrian Guardrails 600 Earthworks 700 Pavements 1100 Kerbs, Footways and Paved Areas 2000 Waterproofing for Structures 2200 Parapets 2400 Brickwork, Blockwork and Stonework	Pavements, footways and the like to be included here if no Roadworks Bills of Quantities
	Retaining Wall, Culvert Subway, Gantry, Large Headwall, Gabion Wall, Diaphragm Wall, Pocket Type Reinforced Brickwork Retaining Wall and the like; Name or Reference	Special Preliminaries		Special Preliminaries should be inserted as a separate construction heading under level 2

LEVEL 1 DIVISION		LEVEL 2 CONSTRUCTION HEADING	LEVEL 3 MMRW SERIES HEADINGS	NOTES
DIVISION	SUB-DIVISION			
		Main Construction	500 Drainage and Service Ducts 600 Earthworks 1100 Kerbs, Footways and Paved Areas 1600 Piling and Embedded Retaining Walls 1700 Structural Steelwork 1800 Structural Steelwork 1900 Protection of Steelwork Against Corrosion 2300 Bridge Expansion Joints and Sealing of Gaps 2400 Brickwork, Blockwork and Stonework	
		Finshings	400 Safety Fences, Safety Barriers And Pedestrian Guardrails 600 Earthworks 700 Pavements 1100 Kerbs, Footways and Paved Areas 2000 Waterproofing for Structures 2200 Parapets 2400 Brickwork, Blockwork and Stonework	Pavements, Footways and the like to be included here if no Roadworks Bill of Quantities

LEVEL 1 DIVISION		LEVEL 2 CONSTRUCTION HEADING	LEVEL 3 MMRW SERIES HEADINGS	NOTES
DIVISION	SUB-DIVISION			
(iv) Structures Where a Choice of Designs is Offered	Structure Designed by the overseeing Organisation;  Name or Reference			To include works within Designated outlines with the exception of works scheduled as not to be included. This division is not to be used where the Contract provides only for a structure designed by the Contractor
	Structure Designed by the Contractor, Name or Reference			
(v) Structures Designed by the Contractor	Structure: Name or Reference			To include works within Designated Outlines with the exception of works scheduled as not to be included
(vi) Service Areas		Roadworks Structures	To comply with the principles set down above for Roadworks and Structures	
(vii) Maintenance Compounds		Roadworks Structures		
(viii) Accommodation Works		Interest; Name or Reference		
(ix) Works for Statutory or other Bodies		Body; Name or Reference	To comply with the principles set down above for Roadworks and Structures	
(x) Daywork		Daywork		
(xi) PC and Provisional Sum		PC and Provisional Sum		To include PC and Provisional sums not allocated to a particular construction heading

**Table 2**

(This Table 2 is an example of the introduction and index to be inserted as a separate page immediately preceding each set of the separate Bills of Quantities included within Series 600: Earthworks in the Roadworks General Bill and Series 700: Pavements in the main Carriageway, Interchanges and Side Roads Bills, to cover the alternative Types of Pavement included in the Contract.)

# ( Bill No.....Roadworks General – Series 600: Earthworks) * ( Bill No.....Main Carriageway – Series 700: Pavements) * ( Bill No.....Interchanges – Series 700: pavements) * ( Bill No..... Side Roads – Series 700: Pavements)		
A separate Bill of Quantities is provided for each of the Types of Pavement permitted by the Contract. Notwithstanding the provision paragraph 4 of the Preambles to the Bill of Quantities, the tenderer shall price, extend and carry to the collection of # ( bill No...Series 600 : earthworks) * (Bill No ... Series 700: Pavements only that Bill of Quantities appropriate to the Type of Pavement he has elected to construct . The tenderer shall price the Bill of Quantities in Series 600 : Earthworks corresponding to the Type of Pavement he prices in Series 700 : Pavements which he has elected to construct.		
Index		
Type of Pavement	Bill No.	Page(s)
Flexible	# ( 6A) * (7A)	
Flexible Composite	# ( 6B) * (7 B)	
Rigid	# ( 6 C) *(7 C)	

(# Include when Index is for Series 600: Earthworks in Roadworks General Bill)  
(\* Include when Index is for Series 700: Pavements in Main Carriageway, interchanges and Side Roads Bills as Appropriate)

**Table 3**

(This Table 3 is an example of the introduction and index to be inserted as a separate page immediately preceding the separate Bills of Quantities included within Series 400: Safety Fences , Safety Barriers and Pedestrian Guardrails in the Roadwork's general Bill to cover the 4 alternative types of safety fence included in the Contract.)

(bill No.....Roadworks General – Series 400: Safety Fence, Safety Barriers and Pedestrian Guardrails)		
A separate Bill of Quantities is provided to include for each of the alternative types of safety fence for the lengths permitted by the Contract.		
Notwithstanding the provisions of paragraph 4 of the Preambles to the Bill of Quantities, the tenderer shall price, extend and carry to the collection of Bill 4 : Safety Barriers and Pedestrian Guardrails only that Bill of Quantities appropriate to the type of safety fence he has elected to construct.		
Index		
Safety Fence Type	Bill No.	Page(s)
Beam	4A	
Wire Rope	4B	

(The lengths of safety fence for which no alternative is permitted are to be included in both the beam and the wire rope Bills).

**Table 4**

(This Table 4 is an example of the introduction and index to be inserted as a separate page immediately preceding the separate Bills of Quantities included within the Bill for Structures Where a Choice of Designs is Offered ( as defined under paragraph 7 of the preparation under paragraph 7 of the preparation of Bill of Quantities.)

Bill No.....Structures Where a Choice of Designs is Offered			
A separate Bill of Quantities is provided for each of the two construction procedures permitted by the Contract. Notwithstanding the provisions of paragraph 4 of the Preambles to Bill of Quantities, the tenderer shall price, extend and carry to the collection of Bill No....Structures Where A Choice of Designs is Offered, only that Bill of Quantities appropriate to the form of construction he has elected to construct.			
Index			
Type of Structure	Structure No.	Bill No.	Page(s)
Structure Designed by the Overseeing Organisation		...A	
Structure Designed by the Contractor		...B	

(Repeat for each Structure)

**Table 5**

(This Table 5 is an example of the Staged Payment Scheduled for new Planting, Seeding and Turfing work to be inserted as a separate page immediately preceding the Collection Page for the separate Bill of Quantities for Series 3000 – Landscape and Ecology.)

Bill No.....Series 3000 – Landscape and Ecology
The following Staged Payments Schedule is to be used for the assessment of payments for work included in the Bill of Quantities in respect of new Planting, Seeding and Turfing measured in accordance with Series 3000 paragraph 6 to 13 inclusive.

Activity	Percentage to be paid on planting in accordance with Note 1 below. [ To be inserted by compiler]	Percentage to be paid in respect of post-planting works in accordance with Note 2 below. [To be inserted by Compiler]	Total
Grass seeding:			
High Frequency Cuts			100%
Medium Frequency cuts			100%
Low Frequency Cuts			100%
Minimal Frequency Cuts			100%
Wildflower Seeding			100%
Turfing			100%
Shrubs including transplants			100%
Trees including transplants			100%
Wildflower Plants			100%
Hedge Plants			100%
Emergent, Marginal and Aquatic Plants			100%
Bulbs:			
In grassed areas			100%
In beds			100%

Note 1: The percentage entered in this column shall be the proportion of the rates and prices in the Bill of Quantities for those item which become due to the Contractor upon the completion of the particular operation.

Note 2: The percentage entered in this column shall be in proportion of the rates and prices in the Bill of Quantities in respect of post-planting works required to be carried out over the remainder of the Contract Period. This proportion shall be divided equally over the period of the contract remaining (in months) after the specific planting has taken place to give a 'periodic value' in respect of post-planting works. Notwithstanding the contract payment terms this 'periodic value' shall be paid on accrual at *..[to be inserted by the Compiler]..*monthly intervals with any balance due on completion of the whole of the Works.

TABLE 1 (05/01)

LEVEL 1 DIVISION	LEVEL 2 CONSTRUCTION HEADING	LEVEL 3 MMHW SERIES HEADINGS	NOTES
(i) Preliminaries	Preliminaries	100 Preliminaries	Special Preliminaries should be inserted under level 3
(ii) Roadworks	Roadworks General	200 Site Clearance	Geotechnics and Hedgebanks and the like should be inserted under level 3 Series 600
		300 Fencing (05/01)	
		400 Safety Fences, Safety Barriers and Pedestrian Guardrails	
		600 Earthworks	
	Main Carriageway	500 Drainage and Service Ducts	Police observation platforms, cycle tracks, and the like should be inserted under level 3 Series 1100
		700 Pavements	
		1100 Kerbs, Footways and Paved Areas	
	Interchanges	500 Drainage and Service Ducts	Cycle tracks and the like should be inserted under level 3 Series 1100
		700 Pavements	
		1100 Kerbs, Footways and Paved Areas	
	Side Roads	500 Drainage and Service Ducts	Cycle tracks and the like should be inserted under level 3 Series 1100
		700 Pavements	
		1100 Kerbs, Footways and Paved Areas	
	Signs, Motorway Communications and Lighting	1200 Traffic Signs and Road Markings	
		1300 Road Lighting Columns, Brackets and CCTV Masts (05/01)	
		1400 Electrical Work for Road Lighting and Traffic Signs	
		1500 Motorway Communications	
	Landscape and Ecology (05/01)	3000 Landscape and Ecology	





LEVEL 1 DIVISION		LEVEL 2 CONSTRUCTION HEADING	LEVEL 3 MMRW SERIES HEADINGS	NOTES
(iii) Structures	SUB-DIVISION			
	Structure in form of Bridge or Viaduct; Name or Reference	Special Preliminaries		Special Preliminaries should be inserted as a separate construction heading under level 2
		Piling	1600 Piling and Embedded Retaining walls	
		Substructure - End Supports	500 Drainage and Ducts 600 Earthworks 1100 Kerbs, Footways and Paved Areas 1700 Structural Concrete 1800 Structural Steelwork 1900 Protection of Steelwork Against Corrosion 2300 Bridge Expansion Joints and Sealing of Gaps 2400 Brickwork, Blockwork and Stonework	To include wingwalls and paved areas beneath structures
		Substructure - Intermediate Supports Substructure - Main Span Substructure - Approach Spans	As for End Supports	To include piers and columns

LEVEL 1 DIVISION		LEVEL 2 CONSTRUCTION HEADING	LEVEL 3 MMRW SERIES HEADINGS	NOTES
DIVISION	SUB-DIVISION			
		Superstructure - Main Span Superstructure - Approach Spans Superstructure - Arch Ribs	500 Drainage and Service Ducts 1700 Structural Concrete 1800 Structural Steelwork 1900 Protection of Steelwork Against Corrosion 2100 Bridge Bearings 2300 Joints and Sealing of Gaps 2400 Brickwork, Blockwork and Stonework	
		Finishings	400 Safety Fences, Safety Barriers and Pedestrian Guardrails 600 Earthworks 700 Pavements 1100 Kerbs, Footways and Paved Areas 2000 Waterproofing for Structures 2200 Parapets 2400 Brickwork, Blockwork and Stonework	Pavements, footways and the like to be included here if no Roadworks Bill of Quantities
	Retaining Wall, Culvert, Subway, Gantry, Large Headwall, Gabion Wall, Diaphragm Wall, Pocket Type Reinforced Brickwork Retaining Wall and the like; Name or Reference	Special Preliminaries		Special Preliminaries should be inserted as a separate construction heading under level 2

LEVEL 1 DIVISION		LEVEL 2 CONSTRUCTION HEADING	LEVEL 3 MMRW SERIES HEADINGS	NOTES
DIVISION	SUB-DIVISION			
		Main Construction	500 Drainage and Service Ducts 600 Earthworks 1100 Kerbs, Footways and Paved Areas 1600 Piling and Embedded Retaining Walls 1700 Structural Concrete 1800 Structural Steelwork 1900 Protection of Steelwork Against Corrosion 2300 Bridge Expansion Joints and Sealing of Gaps 2400 Brickwork, Blockwork and Stonework	
		Finishings	400 Safety Fences, Safety Barriers and Pedestrian Guardrails 600 Earthworks 700 Pavements 1100 Kerbs, Footways and Paved Areas 2000 Waterproofing for Structures 2200 Parapets 2400 Brickwork, Blockwork and Stonework	Pavements, Footways and the like to be included here if no Roadworks Bill of Quantities

LEVEL 1 DIVISION		LEVEL 2 CONSTRUCTION HEADING	LEVEL 3 MMRW SERIES HEADINGS	NOTES
DIVISION	SUB-DIVISION			
(iv) Structures Where a Choice of Designs is Offered	Structure Designed by the Overseeing Organisation; Name or Reference	To comply with the principles set down above for Structures		To include works within Designated Outlines with the exception of works scheduled as not to be included. This division is not to be used where the Contract provides only for a structure designed by the Contractor
	Structure Designed by the Contractor; Name or Reference			
(v) Structures Designed by the Contractor	Structure; Name or Reference			To include works within Designated Outlines with the exception of works scheduled as not to be included
(vi) Service Areas		Roadworks Structures	To comply with the principles set down above for Roadworks and Structures	
(vii) Maintenance Compounds		Roadworks Structures		
(viii) Accommodation Works		Interest; Name or Reference		
(ix) Works for Statutory or Other Bodies		Body; Name or Reference	To comply with the principles set down above for Roadworks and Structures	
(x) Daywork		Daywork		
(xi) PC and Provisional Sum		PC and Provisional Sum		To include PC and Provisional sums not allocated to a particular construction heading



**TABLE 2**

(This Table 2 is an example of the introduction and index to be inserted as a separate page immediately preceding each set of the separate Bills of Quantities included within Series 600 : Earthworks in the Roadworks General Bill and Series 700 : Pavements in the Main Carriageway, Interchanges and Side Roads Bills, to cover the alternative Types of Pavement included in the Contract.)

# (Bill No .....Roadworks General - Series 600: Earthworks) * (Bill No ..... Main Carriageway - Series 700: Pavements) * (Bill No ..... Interchanges - Series 700: Pavements) * (Bill No ..... Side Roads - Series 700: Pavements)		
A separate Bill of Quantities is provided for each of the Types of Pavement permitted by the Contract. Notwithstanding the provisions paragraph 4 of the Preambles to Bill of Quantities, the tenderer shall price, extend and carry to the collection of # (Bill No ... Series 600 :Earthworks) * (Bill No ... Series 700: Pavements) only that Bill of Quantities appropriate to the Type of Pavement he has elected to construct. The tenderer shall price the Bill of Quantities in Series 600 : Earthworks corresponding to the Type of Pavement he prices in Series 700 : Pavements which he has elected to construct.		
Index		
Type of Pavement	Bill No.	Page(s)
Flexible	#(6A) *(7A)	
Flexible Composite	#(6B) *(7B)	
Rigid	#(6C) *(7C)	

(# Include when Index is for Series 600: Earthworks in Roadworks General Bill)

(\* Include when Index is for Series 700: Pavements in Main Carriageway, Interchanges and Side Roads Bills as appropriate)



**TABLE 3**

(This Table 3 is an example of the introduction and index to be inserted as a separate page immediately preceding the separate Bills of Quantities included within Series 400: Safety Fences, Safety Barriers and Pedestrian Guardrails in the Roadworks General Bill to cover the alternative types of safety fence included in the Contract.)

(Bill No ..... Roadworks General - Series 400: Safety Fences, Safety Barriers and Pedestrian Guardrails)		
A separate Bill of Quantities is provided to include for each of the alternative types of safety fence for the lengths permitted by the Contract.		
Notwithstanding the provisions of paragraph 4 of the Preambles to Bill of Quantities, the tenderer shall price, extend and carry to the collection of Bill 4 : Safety Fences, Safety Barriers and Pedestrian Guardrails only that Bill of Quantities appropriate to the type of safety fence he has elected to construct.		
Index		
Safety Fence Type	Bill No.	Page(s)
Beam	4A	
Wire Rope	4B	

(The lengths of safety fence for which no alternative is permitted are to be included in both the beam and the wire rope Bills).

**TABLE 4**

(This Table 4 is an example of the introduction and index to be inserted as a separate page immediately preceding the separate Bills of Quantities included within the Bill for Structures Where a Choice of Designs is Offered (as defined under paragraph 7 of the Preparation of Bill of Quantities).)

Bill No. .... Structures Where a Choice of Designs is Offered			
A separate Bill of Quantities is provided for each of the two construction procedures permitted by the Contract. Notwithstanding the provisions of paragraph 4 of the Preambles to Bill of Quantities, the tenderer shall price, extend and carry to the collection of Bill No. .... Structures Where a Choice of Designs is Offered, only that Bill of Quantities appropriate to the form of construction he has elected to construct.			
Index			
Type of Structure	Structure No.	Bill No.	Page(s)
Structure Designed by the Overseeing Organisation		A	
Structure Designed by the Contractor		...B	

(Repeat for each structure)

**TABLE 5 (i)**

(This Table 5 is an example of the Staged Payment Schedule for new Planting, Seeding and Turfing work to be inserted as a separate page immediately preceding the Collection Page for the separate Bill of Quantities for Series 3000 – Landscape and Ecology.)

Bill No. . . . . - Series 3000 - Landscape and Ecology
The following Staged Payments Schedule is to be used for the assessment of payments for work included in the Bill of Quantities in respect of new Planting, Seeding and Turfing measured in accordance with Series 3000 paragraphs 6 to 13 inclusive.

Activity	Percentage to be paid on planting in accordance with Note 1 below. [To be inserted by Compiler]	Percentage to be paid in respect of post-planting works in accordance with Note 2 below. [To be inserted by Compiler]	Total
Grass Seeding:			
High Frequency Cuts			100%
Medium Frequency Cuts			100%
Low Frequency Cuts			100%
Minimal Frequency Cuts			100%
Wildflower Seeding			100%
Turfing			100%
Trees including whips			100%
Shrubs including transplants			100%
Wildflower Plants			100%
Hedge Plants			100%
Emergent, Marginal and Aquatic Plants			100%
Bulbs:			
in grassed areas			100%
in beds			100%

Note 1: The percentage entered in this column shall be the proportion of the rates and prices in the Bill of Quantities for those items which become due to the Contractor upon the completion of the particular planting operation.

Note 2: The percentage entered in this column shall be the proportion of the rates and prices in the Bill of Quantities in respect of post-planting works required to be carried out over the remainder of the Contract Period. This proportion shall be divided equally over the period of the Contract remaining (in months) after the specific planting has taken place to give a 'periodic value' in respect of post-planting works. Notwithstanding the Contract payment terms this 'periodic value' shall be paid on accrual at . . . [to be inserted by the Compiler] . . . monthly intervals with any balance due on completion of the whole of the Works.



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## **Preambles to Bill of Quantities**

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### **General Directions**

**1** The Bill of Quantities has been prepared in accordance with the Method of Measurement for Road Works.

**2** In the Bill of Quantities the sub-headings and item descriptions identify the work covered by the respective items, read in conjunction with the matters listed against the relevant marginal headings “Item coverage” in Chapter IV of the Method of Measurement for Road Works, these Preambles and the amendments to the Method of Measurement immediately following these Preambles. The nature and extent of the work is to be ascertained by reference to the Drawings, Specification and Conditions of Contract. The rates and prices entered in the Bill of Quantities shall be deemed to be the full inclusive value of the work covered by the several items including the following, unless expressly stated otherwise:

- (i) Labour and costs in connection therewith.
- (ii) The supply of materials, goods, storage and costs in connection therewith including delivery to Site. Taking delivery of materials and goods supplied by others, unloading, storage, and costs in connection therewith.
- (iii) Plant and costs in connection therewith.
- (iv) Fixing, erecting and installing or placing of materials and goods in position.
- (v) Temporary Works.
- (vi) The effect on the phasing of the Works or any element of the Works to the extent set forth or reasonably implied in the documents on which the tender is based.
- (vii) General obligations, liabilities and risks involved in the execution of the Works set forth or reasonably implied in the documents on which the tender is based.
- (viii) Establishment charges, overheads and profit.
- (ix) Waste.
- (x) Testing carried out by the Contractor in accordance with the particular requirements of Appendix 1/5 including supplying results of tests, reports and certificates.
- (xi) Supply and delivery of samples to the Overseeing Organisation in accordance with the particular requirements of Appendix 1/6.
- (xii) Checking, inspecting, examining, measuring and verifying goods, materials and workmanship including supplying results, reports and certificates.
- (xiii) Attendance and transport for sampling and testing carried out by the Overseeing Organisation.
- (xiv) Complying with Quality Assurance requirements of the contract and

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providing certificates of conformity.

(xv) Preparation and supply of detailed working drawings.

(xvi) Awaiting approvals and consent.

(xvii) Where stipulated complying with the particular requirements of Appendix 1/24.

**Measurement**

**3** (i) The measurement of work shall be computed net from the dimensions stated in the Contract unless otherwise stated in the Method of Measurement.

(ii) Where the tender documents specify the Type of Pavement to be constructed then the measurement of work shall be based upon the thinnest pavement construction and surfacing over structures permitted by the Contract for that Type of Pavement. Where the tender documents provide for the Contractor to select the type of safety fence, pavement or buried structure (where the structure is not within Designated Outlines) to be constructed then the measurement of all work in each area so affected shall be based upon the thinnest pavement construction and surfacing over structures permitted by the Contract in that area for the particular type of safety fence, pavement or buried structure the Contractor has elected to construct.

**Pricing of Items**

**4** Each individual item shall have a rate or price entered against it. Rates and prices shall be expressed to two decimal places.

Where in the Contract a choice of alternatives is permitted:

**Alternative Specified Materials, Designs and Options Within Types of Pavement**

(i) the description billed and the rates and prices inserted shall be deemed to cover any of the permitted alternative materials or designs the Contractor may elect to use;

(ii) and where separate Bills of Quantities are provided within Series 600: Earthworks for each Type of Pavement permitted by the Contract the rates and prices inserted in respect of the earthworks for the particular Type of Pavement shall be deemed to cover the earthworks for any inherent permitted option within the Type of Pavement elected to be constructed by the Contractor;

(iii) and where separate Bills of Quantities are provided within Series 700: Pavements for each Type of Pavement permitted by the Contract the rates and prices inserted in respect of the particular Type of Pavement shall also be deemed to cover any inherent permitted option within the Type of Pavement elected to be constructed by the Contractor.

In all cases the rates and prices inserted in all Series of the Bill of Quantities shall be deemed to include for any adjustments of work content, rates, costs and the like occasioned by the choice of alternatives elected to be used or constructed by the Contractor.

**Privately and Publicly Owned Services or Supplies**

**6** The information in the Contract as to the whereabouts of existing services and mains is believed to be correct but the Contractor shall not be relieved thereby of his obligations under the Contract. The Contractor shall include in his rates and prices for locating and taking measures for the support and full protection of pipes, cables and other apparatus during the progress of

the Works, obtaining the written consent of the appropriate authority to interrupt the service or supply and for keeping the Overseeing Organisation informed of all arrangements he makes with the owners of privately owned services or supplies, Statutory Undertakers and Public Authorities as appropriate.

## **Labours**

**7** Labours in connection with Nominated Sub-contractors shall include:

- (i) in the case of work or services executed - for affording the use of existing working space, access, temporary roads, erected scaffolding, working shelters, staging, ladders, hoists, storage, latrines, messing, welfare and other facilities existing on Site and the provision of protection, water, electricity for lighting and clearing away rubbish and debris arising from the work;
- (ii) in the case of goods, materials or services supplied - for taking delivery, unloading, storing, protecting and returning crates, cartons and packing materials.

## **Roadworks Overall Requirements**

**8** The Contractor shall allow in his rates and prices for complying with requirements in respect of pavement construction, horizontal alignments, surface levels and surface regularity of pavement courses, dealing with changes in weather conditions, use of surfaces by traffic and construction plant, and general requirements for sub-bases and base courses.

## **Work Within and Below Non-tidal Open Water or Tidal Water**

**9** The Contractor shall allow in his rates and prices for taking measures required to execute work within and below non-tidal open water or tidal water. The Contractor shall include in his rates and prices for any investigations to ascertain actual boundaries, surface levels and ranges affected by non-tidal open water or tidal water.

## **Dealing with Flow**

**10** The Contractor shall allow in his rates and prices for taking measures to deal with the existing flow of water, sewage and the like.

## **Reimbursement of Fees, Overseeing Organisation's Telephone Calls**

**11** The Contractor will be reimbursed the actual price paid by the Contractor in respect of:

- (i) fees, rates and taxes - the sums certified as properly repayable to the Contractor in accordance with the Contract;
- (ii) Overseeing Organisation's telephone calls - telephone calls charged to the number or numbers allocated to the Overseeing Organisation. Any other cost, charge or expense in respect of these items shall be allowed for in the rates and prices for temporary accommodation.

## **Site Limitations and Constraints Hard Material**

**12** The Contractor shall allow in his rates and prices for complying with any limitations and constraints on the use of the Site.

**13** For the purposes of the Contract the following are designated as Hard Material in accordance with Chapter 1 Definitions, paragraph 1(i)(i):

- (a) .....\* strata;
- (b) those deposits designated by limits shown on the Drawings;
- (c) existing pavements, footways, paved areas (but excluding unbound materials) and foundations in masses in excess of 0.20 cubic metres.

**Equivalent Products and Materials**

**14** Where the Contractor offers an equivalent product or material in place of the one identified or specified, then the rates and prices in the Bill of Quantities shall be deemed to include for all the obligations and costs associated with the incorporation of the equivalent into the Works, including design, provision of data and drawings, certificates, awaiting acceptance, resubmissions and modifications and amendments to the Works.

Unless specifically stated to the contrary in the Contract the measurement of the Works affected by the incorporation of the equivalent products and materials shall be based on the Tender documents and not on the Works as amended and completed to incorporate the equivalent products and materials.

**Permanent Works Designed by the Contractor**

**15** Where the Contract requires part(s) of the Permanent Works to be designed by the Contractor, the rates and prices in the Bill of Quantities shall include for all the obligations and costs associated with the incorporation of the Contractor's design into the Works, including design, provision of data and drawings, certificates, awaiting approvals, resubmissions and modifications and amendments to the Works. Additionally the rates and prices in the Bill of Quantities shall include for the costs of all testing and sampling to be carried out by the Contractor in respect of workmanship, goods and materials incorporated into the Works or to prove the Contractor's design.

**Structures Designed by the Contractor**

**16** In respect of each priced Bill for a structure designed by the Contractor, the Contractor shall prepare a priced schedule of quantities. This priced schedule shall be prepared in accordance with the relevant Chapters and Series of the Method of Measurement and submitted to the Overseeing Organisation for acceptance.

The quantities, rates and prices in the priced schedule of quantities shall in each case, when extended and totalled, give the amount entered in the priced Bill of Quantities against the item for the relevant structure designed by the Contractor.

The priced schedule of quantities shall only be used for Payment Applications and for the valuation of variations ordered under the Contract in connection with structures designed by the Contractor.

Unless specifically stated to the contrary in the Contract the measurement of the Works affected by the incorporation of the Contractor's design shall be based on the Tender documents and not on the Works as amended and completed to incorporate the Contractor's design.

The parts of the Works included by the Contractor in the priced schedule of quantities shall include all the parts of the Works within the Designated Outline except those designed and scheduled by the Overseeing Organisation as not to be included.

**Testing**

**17** Testing as paragraph 2(x) above, is in respect of tests to be carried out by the Contractor to verify workmanship, goods and materials incorporated into the permanent works and testing of the permanent works in order to prove the Overseeing Organisation's design as set out in Appendix 1/5.

Checking, inspecting, examining, measuring and verifying goods, materials and workmanship incorporated in the permanent works, as paragraph 2(xii) above, is in respect of other operations set forth or reasonably implied in the Contract to be carried out by the Contractor to demonstrate compliance with the particular requirements of the Contract, or to prove the Overseeing Organisation's design where not separately listed in Appendix 1/5, but excluding trial erection of structural steelwork which shall be measured separately in accordance with Series 1800.

Procedural trials, trial panels and trial areas required to be carried out or constructed as separate operations in advance of the permanent works in order to verify goods, materials and workmanship shall not be measured separately but are included within the item coverage for the relevant Series.

Testing of existing structures and other investigative works shall be individually measured within the relevant Series.

**Landscape and Ecology**

**18** The rates and prices inserted in the Bill of Quantities for new Planting, Seeding and Turfing measured in accordance with Volume 4 – Series 3000 include for all post-planting maintenance work required to be carried out in accordance with the Specification and the relevant Appendices.

In order to properly reflect the scope and duration of the planting and postplanting requirements a series of staged payments for the various items of planting, seeding and turfing will be made in accordance with the Staged Payments Schedule.

The Staged Payments Schedule is to be inserted in the Bill of Quantities immediately preceding the collection page for Landscape and Ecology and shall be used for assessing payments due to the Contractor in accordance with the Contract.

**†Amendments to the Method of Measurement**

**19** For the purposes of the Contract the Method of Measurement for Highway Works is amended in accordance with the pages immediately following.

The Preambles to Bill of Quantities (duly completed) must be reproduced unaltered and bound in the Bill of Quantities.

\* To be completed by compiler as appropriate.

† Where amendments to Chapter IV of the Method of Measurement are required in accordance with paragraph 1(b) of Chapter II, General Principles, this preamble should be the last numbered preamble and inserted immediately prior to the amendments.]