

ARCHITECTURAL SERVICES DEPARTMENT

**STANDARD METHOD OF
MEASUREMENT
FOR
BUILDING ELEMENTS**

**GOVERNMENT OF THE HONG KONG
SPECIAL ADMINISTRATIVE REGION**

**ARCHITECTURAL SERVICES DEPARTMENT
QUANTITY SURVEYING BRANCH**

**QUEENSWAY GOVERNMENT OFFICES
66 QUEENSWAY
HONG KONG**

2001 EDITION

ARCHITECTURAL SERVICES DEPARTMENT

**STANDARD METHOD OF
MEASUREMENT
FOR
BUILDING ELEMENTS**

2001 EDITION

COPYRIGHT

I N D E X

INTRODUCTION	iii
01 PRELIMINARIES	1
02 SUBSTRUCTURE	2
FN - Foundations	2
03 SUPERSTRUCTURE	4
SC - Structure (Reinforced Concrete)	4
SO - Structure (Other)	6
EW - External Walls (Non-structural)	8
WD - Windows and External Doors	9
CW - Curtain Walling	10
IP - Internal Partitions	11
ID - Internal Doors	12
IF - Internal Finishes	13
EF - External Finishes	15
FF - Fittings and Fixtures	17
SV - Plumbing Services	18
BB - Builder's Work in Connection with Services	20
BP - Builder's Profit and Attendance on Mechanical & Electrical Services	21

04	MECHANICAL & ELECTRICAL SERVICES	22
	EE - Electrics	22
	SB - Low Voltage (LV) Cubicle Switchboards Installation..	25
	GE - Diesel Generating Sets Installation.....	26
	UP - Uninterruptible Power Supply System.....	27
	CB - Broadcast Reception Installation.....	28
	AC - Air-conditioning	29
	TG - Gas Installation	33
	FS - Fire Services	34
	MS - Horizontal and Vertical Movement Systems	37
	BA - Building Automation	38
	SP - Other Specialist Services	39
05	EXTERNAL WORKS AND DRAINAGE	40
	XW - External Works	40
	DR - Drainage	43
06	SITE DEVELOPMENT	45
	SI - Site Investigation	45
	SF - Site Formation	46
	PI - Piling	47
	CS - Caissons	48
07	STORES, FURNITURE & EQUIPMENT	49
	GS - Government Stores	49
	FE - Furniture and Equipment	50
08	CONSULTANT' S FEES	51
	CF - Consultant' s Fees	51
09	CONTINGENCY	53
	CY - Contingency	53

INTRODUCTION

This booklet contains the rules of measurement for the standard set of building elements to be used on Architectural Services Department building projects.

THE PROJECT COST MODEL

The Project Cost Model on page (iv) shows how the total project cost is built up from those costs relating to the normal main contract (NET BUILDING COST [NBC]) which, when added to the mechanical & electrical services cost, become the GROSS BUILDING COST [GBC]. The GBC represents the cost of the structure above and below ground. However certain site development and external works costs need to be included and these are added to the GBC to compute the NET PROJECT COST [NPC]. The costs of government stores, furniture and equipment, consultant's fees and a contingency are added to calculate the GROSS PROJECT COST [GPC].

The Project Cost Model
01 - Preliminaries plus 02 - Substructure plus 03 - Superstructure
NET BUILDING COST
plus 04 - Mechanical & Electrical Services
GROSS BUILDING COST
plus 05 - External Works & Drainage plus 06 - Site Development
NET PROJECT COST
plus 07 - Stores, Furniture & Equipment plus 08 - Consultant's Fees plus 09 - Contingency
GROSS PROJECT COST

THE ELEMENT COST MODEL

Each project cost is broken down into nine element groups. These are shown in the previous Project Cost Model and again in the Project Element Cost Model on page (vi).

Within each element group there are various elements. Each element represents a function of the building or its environs. There are thirty six basic elements representing the major cost centres of the total project.

To allow finer control over the apportionment of cost, some elements are further divided into sub-elements. This permits cost significant parts of the element to be monitored in some details. For example the Structure element is divided into Frame, Roof, Upper Floors, Structural Walls, etc. A full list of sub-elements is given in Table 1.

RULES OF MEASUREMENT

Generally

To standardise the preparation of cost analyses, measurement rules are provided. Each element/sub-element is given a measurement unit for easy cost identification. Those elements given a measurement unit of ITEM assume that a lump sum value will be allocated, thereby making it unnecessary to lay down measurement rules. On the other hand all other measurement units, e.g. M³, M², M etc., have been given measurement rules which reflect the complexity of the measurement item.

There is also a 'definition' describing the various works which fall into each element/sub-element. The definition is not intended to be restrictive but if used with the section indicating 'exclusions', then it is not too difficult to identify the appropriate element for a particular work item.

Definition of Construction Floor Area - CFA

CFA is the area to be used in describing the amount of building works completed. This is the sum of all areas at all floor levels, including basements, mezzanine floors, balconies and enclosed rooftop structures, measured to the outer face of the external walls including its external cladding, i.e. the main building line, and measured over all partitions, columns, internal or external structures and load-bearing walls, party walls, stair wells, lift wells, escalator openings, pipe and drain ducts, cable riser shafts and the like. Areas of bay windows are also included.

For exclusions, generally, decorative feature projections beyond the outer face of external walls such as fins, architrave, solar shading devices and the like shall be excluded from the calculation of CFA. Also excluded are uncovered trafficable roof areas such as external playgrounds, landscaped areas and the like.

The Project Element Cost Model

G R O S S P R O J E C T C O S T	N E T P R O J E C T C O S T	G R O S S B U I L D I N G C O S T	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; vertical-align: top; width: 5%;">N E T B U I L D I N G C O S T</td> <td style="width: 5%;"></td> <td style="width: 10%; text-align: center; vertical-align: top;"> 01 PRELIMINARIES PR Preliminaries </td> <td style="width: 10%; text-align: center; vertical-align: top;"> 02 SUBSTRUCTURE FN Foundations </td> <td style="width: 10%; text-align: center; vertical-align: top;"> 03 SUPERSTRUCTURE SC Structure (Reinforced Concrete) SO Structure (Other) EW External Walls (Non-structural) WD Windows and External Doors CW Curtain Walling IP Internal Partitions ID Internal Doors IF Internal Finishes EF External Finishes FF Fittings and Fixtures SV Plumbing Services BB Builders Work in Connection with Services BP Builders Profit and Attendance on M & E Services </td> </tr> <tr> <td style="text-align: center; vertical-align: top;"> 04 M & E SERVICES EE Electrics SB Low Voltage Cubicle Switchboard GE Diesel Generating Sets UP Uninterruptible Power Supply CB Broadcast Reception AC Air-conditioning TG GAS FS Fire Services MS Horizontal & Vertical Movement Systems BS Building Automation SP Other Specialist Services </td> <td style="width: 5%;"></td> <td style="width: 10%; text-align: center; vertical-align: top;"> 05 EXTERNAL WORKS & DRAINAGE XW External Works DR Drainage </td> <td style="width: 10%; text-align: center; vertical-align: top;"> 06 SITE DEVELOPMENT SI Site Investigation SF Site Formation PI Piling CS Caissons </td> </tr> <tr> <td style="width: 5%;"></td> <td style="width: 10%; text-align: center; vertical-align: top;"> 07 STORES, FURNITURE & EQUIPMENT GS Government Stores FE Furniture & Equipment </td> <td style="width: 10%; text-align: center; vertical-align: top;"> 08 CONSULTANTS FEES CF Consultants Fees </td> <td style="width: 10%; text-align: center; vertical-align: top;"> 09 CONTINGENCY CY Contingency </td> </tr> </table>	N E T B U I L D I N G C O S T		01 PRELIMINARIES PR Preliminaries	02 SUBSTRUCTURE FN Foundations	03 SUPERSTRUCTURE SC Structure (Reinforced Concrete) SO Structure (Other) EW External Walls (Non-structural) WD Windows and External Doors CW Curtain Walling IP Internal Partitions ID Internal Doors IF Internal Finishes EF External Finishes FF Fittings and Fixtures SV Plumbing Services BB Builders Work in Connection with Services BP Builders Profit and Attendance on M & E Services	04 M & E SERVICES EE Electrics SB Low Voltage Cubicle Switchboard GE Diesel Generating Sets UP Uninterruptible Power Supply CB Broadcast Reception AC Air-conditioning TG GAS FS Fire Services MS Horizontal & Vertical Movement Systems BS Building Automation SP Other Specialist Services		05 EXTERNAL WORKS & DRAINAGE XW External Works DR Drainage	06 SITE DEVELOPMENT SI Site Investigation SF Site Formation PI Piling CS Caissons		07 STORES, FURNITURE & EQUIPMENT GS Government Stores FE Furniture & Equipment	08 CONSULTANTS FEES CF Consultants Fees	09 CONTINGENCY CY Contingency
	N E T B U I L D I N G C O S T		01 PRELIMINARIES PR Preliminaries	02 SUBSTRUCTURE FN Foundations	03 SUPERSTRUCTURE SC Structure (Reinforced Concrete) SO Structure (Other) EW External Walls (Non-structural) WD Windows and External Doors CW Curtain Walling IP Internal Partitions ID Internal Doors IF Internal Finishes EF External Finishes FF Fittings and Fixtures SV Plumbing Services BB Builders Work in Connection with Services BP Builders Profit and Attendance on M & E Services											
	04 M & E SERVICES EE Electrics SB Low Voltage Cubicle Switchboard GE Diesel Generating Sets UP Uninterruptible Power Supply CB Broadcast Reception AC Air-conditioning TG GAS FS Fire Services MS Horizontal & Vertical Movement Systems BS Building Automation SP Other Specialist Services		05 EXTERNAL WORKS & DRAINAGE XW External Works DR Drainage	06 SITE DEVELOPMENT SI Site Investigation SF Site Formation PI Piling CS Caissons												
	07 STORES, FURNITURE & EQUIPMENT GS Government Stores FE Furniture & Equipment	08 CONSULTANTS FEES CF Consultants Fees	09 CONTINGENCY CY Contingency													

Table 1

Standard List of Elements and Sub-Elements

Major Cost Code	Minor Cost Code	Element	Sub-Element	
NET BUILDING COST	01 PRELIMINARIES	PR PRELIMINARIES		
	02 SUBSTRUCTURE	FN Foundations	FNSE Structural Elements FNBW Basements FNGF Ground Floor Slabs FNSU Foundation Sundries	
	03 SUPERSTRUCTURE	SC Structure (RC)	SCFF Frame (RC)	SCFF Frame (RC)
			SCRf Roofs (RC)	SCRf Roofs (RC)
			SCUF Upper Floors (RC)	SCUF Upper Floors (RC)
			SCSW Structural Walls (RC)	SCSW Structural Walls (RC)
			SCSL Stairs & Landings (RC)	SCSL Stairs & Landings (RC)
			SCBR Balustrades & Handrails (RC)	SCBR Balustrades & Handrails (RC)
			SCSU Structure Sundries (RC)	SCSU Structure Sundries (RC)
			SO Structure (Other)	SOFF Frame (Other)
		SORF Roofs (Other)		SORF Roofs (Other)
		SOUF Upper Floors (Other)		SOUF Upper Floors (Other)
		SOSW Structural Walls (Other)		SOSW Structural Walls (Other)
		SOSL Stairs & Landings (Other)		SOSL Stairs & Landings (Other)
		SOBR Balustrades & Handrails (Other)		SOBR Balustrades & Handrails (Other)
		SOSU Structure Sundries (Other)		SOSU Structure Sundries (Other)
		EW External Walls (non-structural)		
		WD Windows & External Doors		
		CW Curtain Walling		
		IP Internal Partitions		
		ID Internal Doors		
	IF Internal Finishes	IFWF Wall Finishes	IFWF Wall Finishes	
		IFFF Floor Finishes	IFFF Floor Finishes	
IFCF Ceiling Finishes		IFCF Ceiling Finishes		
IFSF Stair Finishes		IFSF Stair Finishes		
IFBF Balustrade & Handrail Finishes		IFBF Balustrade & Handrail Finishes		
IFSU Internal Finishes Sundries		IFSU Internal Finishes Sundries		
EF External Finishes				
EF	EFRF Roof Finishes	EFRF Roof Finishes		
	EFWF Wall Finishes (External)	EFWF Wall Finishes (External)		
	EFFF Floor Finishes (External)	EFFF Floor Finishes (External)		
	EFCE Ceiling Finishes (External)	EFCE Ceiling Finishes (External)		
	EFSE Stair Finishes (External)	EFSE Stair Finishes (External)		
	EFBE Balustrade & Handrail Finishes (External)	EFBE Balustrade & Handrail Finishes (External)		
	EFSE External Finishes Sundries	EFSE External Finishes Sundries		
	FF Fittings and Fixtures			
SV Plumbing Services	SVRW Rainwater Installations	SVRW Rainwater Installations		
	SVSF Sanitary Fittings	SVSF Sanitary Fittings		
	SVSW Soil & Waste Installations	SVSW Soil & Waste Installations		
	SVCW Cold Water Installations	SVCW Cold Water Installations		
	SVHW Hot Water Installations	SVHW Hot Water Installations		
	SVFW Flushing Water Installations	SVFW Flushing Water Installations		
	SVFF Fire Fighting Installations	SVFF Fire Fighting Installations		
	SVRD Refuse Disposal	SVRD Refuse Disposal		
	SVSU Plumbing Services Sundries	SVSU Plumbing Services Sundries		

GROSS BUILDING COST	04 MECHANICAL & ELECTRICAL SERVICES	BB	BWIC with Services		
		BP	Builders Profit & Attendance on M & E Services		
		EE	Electrics	EEML	Incoming Mains
				EEMD	Main & Submain
				EELP	Lighting & Power
				EECC	Call Bell System
				EEOS	Electrical Works Associated with Other Services
				EETT	Trunking & Tray
				EEPR	Lightning Protection
				EEEB	Earthing & Bonding
				EEGS	Items Supplied by Government
				EESU	Electrical Sundries
				SB	Low Voltage (LV) Cubicle Switchboards
				SBSI	LV Cubicle Switchboards Installation
				SBSU	LV Cubicle Switchboards Installation Sundries
				GE	Diesel Generating Sets
				GESI	Diesel Generating Sets Installation
				GESU	Diesel Generating Sets Installation Sundries
				UP	Uninterruptible Power Supply
				UPSI	Uninterruptible Power Supply System
		UPSU	Uninterruptible Power Supply System Sundries		
		CB	Broadcast Reception		
		CBSI	Broadcast Reception Installation		
		CBSU	Broadcast Reception Installation Sundries		

		AC Air-conditioning	ACCH Chilled Water System ACCW Condenser Water System ACHW Heating Water System ACSC Steam & Condensate System ACFO Fuel Oil System ACWT Water Treatment ACAC Air Handling & Distribution System ACCD Condensate Drain System ACUA Unitary Air Conditioning System ACCR Cold Rooms ACMV Mechanical Ventillation System ACSV Staircase Ventilation System ACKE Kitchen Exhaust System ACSE Special Exhaust System ACEC Electrical & Control System ACSU Air-conditioning Sundries
		TG Gas	
		FS Fire Service	FSHH Fire Hydrant & Hosereel System FSSS Sprinkler System FSGE Gaseous Extinguishing System FSAV Audio/Visual Advisory System FSAD Automatic Fire Alarm & Detection System FSPA Portable Hand-operated Appliances FSES Electricity Supply FSCS Control System FSSU Fire Service Sundries

NET PROJECT COST	05 EXTERNAL WORKS & DRAINAGE	MS	Horizontal & Vertical Movement Systems	MSLF	Lifts	
				MSCO	Conveyors	
				MSES	Escalators	
		BA	Building Automation			
		SP	Other Specialist Services	SPKE	Kitchen Equipment	
				SPOS	Other Specialist Installations	
				SPME	Mechanical Plant & Equipment	
		XW	External Works	XWSP	Site Preparation	
				XWRS	Retaining Structures	
				XWSE	Site Enclosures & Divisions	
				XWRO	Roads & Pavings	
				XWHL	Hard Landscaping	
				XWSL	Soft Landscaping	
				XWFE	Fittings & Equipment	
				XWES	External Services	
		XWUC	Unility Connections			
		XWAN	Ancillary Structures			
		DR	Drainage	DRSW	Soil & Surface Water	
				DRMH	Manholes	
				DRST	Sewage Treatment	
				DRCH	Channels	
				DRCP	Catchpits	
				DRDC	Drainage Connections	
	06 SITE DEVELOPMENT	SI	Site Investigation			
		SF	Site Formation			
		PI	Piling	PISP	Sheet Piling	
				PIPP	Driven or Bored Piling	
		CS	Caissons	CSCP	Caisson Piling	
				CSCW	Caisson Contiguous Walls	
GROSS PROJECT COST	07 STORES, FURNITURE & EQUIPMENT	GS	Government Stores	GSBY	Building Stores	
				GSBZ	M & E Services Stores	
		FE	Furniture & Equipment	FECL	Client Department	
				FEDA	Domestic Appliances	
		08 CONSULTANT' S FEES	CF	Consultant' s Fees	CFGX	Geotechnical Consultants
					CFAR	Architectural Consultants
					CFST	Structural Consultants
					CFBS	Building Services Consultants
					CFQS	Quantity Surveying Consultants
					CFOO	Other Specialist Consultants
		09 CONTINGENCY	CY	Contingency		

GROUP ELEMENT : 01 - PRELIMINARIES

Element	:	PR - Preliminaries
Unit	:	M ²
Rules	:	Construction floor area - measured overall to the outer face of external wall.
Definition	:	<u>All</u> contractor's preliminary costs not otherwise included in the unit rates.
Exclusions	:	

GROUP ELEMENT : 02 - SUBSTRUCTURE

Element	:	FN - Foundations
Unit	:	M ²
Rules	:	Site area of building at ground floor level - measured overall to the outer face of external wall.
Definition	:	Work below and including ground floor slab.
Exclusions	:	Internal partitions, upper suspended basement slabs, finishes etc. in basements and finishes to the ground floor slab.

Sub-Element	:	FNSE - Structural Elements
Unit	:	M ²
Rules	:	Site area of building at ground floor level - measured overall to the outer face of external wall.
Definition	:	Pile caps, ground beams, tie beams, structural walls, columns etc. including excavation, blinding, concrete, reinforcement and formwork.
Exclusions	:	

Sub-Element	:	FNBW - Basements
Unit	:	M ³
Rules	:	Volume of basement measured to outside face of the external wall, the top side of the basement cover slab and the underside of the basement ground floor slab.
Definition	:	Basements, lift and escalator pits including bulk excavation, external walls, tanking and filling around external walls. Including diaphragm walls and barrettes.
Exclusions	:	Internal partitions, suspended slabs, finishes etc. are to be included in the appropriate superstructure element. Lowest basement slabs to be included with ground floor slabs (see FNGF).

Sub-Element	:	FNGF - Ground floor slabs
Unit	:	M ²
Rules	:	Area measured overall to the outer face of external wall.
Definition	:	Ground floor and lowest basement slabs, including reduce level excavation, hardcore filling, membranes, concrete, reinforcement and formwork. Includes thickening out for non-structural walls.
Exclusions	:	Ground beams (see FNSE). Service ducts (see FNSU). Upper basement floor slabs (see SCUF).

-

Element : FN - Foundations cont' d

Sub-Element	:	FNSU - Foundation Sundries
Unit	:	ITEM
Rules	:	
Definition	:	Service ducts including excavation, concrete, reinforcement and formwork. Underpinning and all temporary support.
Exclusions	:	

GROUP ELEMENT : 03 - SUPERSTRUCTURE

Element	:	SC - Structure (Reinforced Concrete)
Unit	:	M ²
Rules	:	Construction floor area - measured overall to the outer face of external wall.
Definition	:	All structural elements of the building above ground floor slab, constructed in reinforced concrete.
Exclusions	:	Steel structures, brick structures and infill walls, timber and other types of structure.

Sub-Element	:	SCFF - Frame (Reinforced Concrete)
Unit	:	M ²
Rules	:	Construction floor area - measured overall to the outer face of external wall.
Definition	:	Columns and beams, fins and projections where part of columns and beams including reinforcement, formwork, fair faced formwork finishes. Portal frames. Includes pre-cast concrete units.
Exclusions	:	Concrete casing to steel framed buildings (see SOFF).

Sub-Element	:	SCRF - Roof (Reinforced Concrete)
Unit	:	M ²
Rules	:	Gross roof area - measured overall on plan to outer face of external wall, rainwater gutter, verge or eaves.
Definition	:	Roof slabs, rainwater gutters, verge or eaves upstand kerbs including reinforcement, formwork, fair faced formwork finishes. Includes pre-cast concrete units.
Exclusions	:	Parapet wall (see SCSW).

Sub-Element	:	SCUF - Upper Floors (Reinforced Concrete)
Unit	:	M ²
Rules	:	Area measured overall to the outer face of external wall.
Definition	:	Suspended floors, upper basement suspended floors, mezzanine floors, balcony floors including reinforcements, formwork, fair faced formwork finishes. Includes pre-cast concrete units.
Exclusions	:	Floor support beams (see SCFF).

-

-

Element : SC - Structure (Reinforced Concrete) cont' d

Sub-Element	:	SCSW - Structural Walls (Reinforced Concrete)
Unit	:	M ²
Rules	:	Measured the actual area of structural wall between columns.
Definition	:	Structural walls, lift shaft walls, balcony and parapet walls, fins and projections including reinforcement, formwork, fair faced formwork finishes. Includes pre-cast concrete units.
Exclusions	:	Columns, fins and projections where part of columns and beams, infill panel walls and other non-structural walls (see EW & IP).

Sub-Element	:	SCSL - Stairs & Landings (Reinforced Concrete)
Unit	:	M ²
Rules	:	Measured the gross plan area at each level including intermediate landings.
Definition	:	Stair slabs, treads, risers, intermediate landings, strings and aprons including reinforcement, formwork, fair faced formwork finishes. Includes pre-cast concrete units.
Exclusions	:	Landings at floor levels (see SCUF).

Sub-Element	:	SCBR - Balustrades & Handrails (Reinforced Concrete)
Unit	:	M
Rules	:	Measured the length on plan of the balustrade or handrail.
Definition	:	Includes balustrades and handrails to stairs and other locations.
Exclusions	:	

Sub-Element	:	SCSU - Structure Sundries (Reinforced Concrete)
Unit	:	ITEM
Rules	:	
Definition	:	Sundry items, including planter boxes and window boxes. Expansion joints. Includes pre-cast concrete sundries.
Exclusions	:	Penthouses, machine rooms, stair enclosures at roof level and water tanks.

GROUP ELEMENT : 03 - SUPERSTRUCTURE

Element	:	SO - Structure (Other)
Unit	:	M ²
Rules	:	Construction floor area - measured overall to the outer face of external wall.
Definition	:	All structural elements of the building above ground floor slab, constructed in materials other than reinforced concrete.
Exclusions	:	Reinforced concrete structure (see SC).

Sub-Element	:	SOFF - Frame (Other)
Unit	:	M ²
Rules	:	Construction floor area - measured overall to the outer face of external wall.
Definition	:	For structural steel: columns, beams and trusses including concrete or other fire protection, reinforcement, formwork, fair faced formwork finishes. For timber: posts, beams and trusses. For brick/masonry: columns, piers and arches. Portal frames.
Exclusions	:	For timber: joists and rafters (see SOUF & SORF).

Sub-Element	:	SORF - Roof (Other)
Unit	:	M ²
Rules	:	Gross roof area - measured overall on plan to outer face of external wall, verge or eaves.
Definition	:	Roofs of steel, timber or other material (excluding reinforced concrete).
Exclusions	:	For timber or other roofs: timber board or other sheet or proprietary roof covering to be included in the relevant finishes section (see EFRF).

Sub-Element	:	SOUF - Upper Floors (Other)
Unit	:	M ²
Rules	:	Area measured overall to the outer face of external wall.
Definition	:	Suspended floors, mezzanine floors, balcony floors, of steel, timber or other materials (excluding reinforced concrete). Proprietary floors including concrete topping.
Exclusions	:	

Sub-Element	:	SOSW - Structural Walls (Other)
Unit	:	M ²
Rules	:	Measured the actual area of structural wall between columns.
Definition	:	Structural walls of steel, timber, brick, masonry or other materials (excluding reinforced concrete).
Exclusions	:	Finishes, unless part of a proprietary system. Non-structural walls.

Element : SO - Structure (Other) cont' d

Sub-Element	:	SOSL - Stairs and Landings (Other)
Unit	:	M ²
Rules	:	Measured the gross plan area at each level including intermediate landings.
Definition	:	Includes treads, risers, intermediate landings, strings and aprons.
Exclusions	:	Landings at floor level and finishes. Reinforced concrete stairs and landings (see SCSL).

Sub-Element	:	SOBR - Balustrades and Handrails (Other)
Unit	:	M
Rules	:	Measured the length on plan of the balustrade or handrail.
Definition	:	Includes balustrades and handrails to stairs and other locations.
Exclusions	:	Reinforced concrete balustrades and handrails (see SCBR).

Sub-Element	:	SOSU - Structure Sundries (Other)
Unit	:	ITEM
Rules	:	
Definition	:	Roof lights and lantern lights including framing and glass. Includes other structure sundries (excluding reinforced concrete).
Exclusions	:	

GROUP ELEMENT : 03 - SUPERSTRUCTURE

Element	:	EW - External Walls (Non-structural)
Unit	:	M ²
Rules	:	Measured the actual area of external wall between columns.
Definition	:	Includes all non-structural external walls, cladding, infill panel walls, balcony and parapet walls (other than in reinforced concrete).
Exclusions	:	Windows and external doors. Curtain walling. Finishes (see WD, CW & EFWF).

GROUP ELEMENT : 03 - SUPERSTRUCTURE

Element	:	WD - Windows and External Doors
Unit	:	M ²
Rules	:	Measured the gross area of windows and external doors.
Definition	:	Windows and external doors including all glass, ironmongery, louvres, fixings, trimmings, decoration and other associated works. Roller shutter doors and folding doors.
Exclusions	:	Curtain walling, venetian blinds, curtains, curtain tracks and pelmets (see CW & FF). Finishes to reveals.

GROUP ELEMENT : 03 - SUPERSTRUCTURE

Element	:	CW - Curtain Walling
Unit	:	M ²
Rules	:	Measured the gross area of wall covering including all openings in the same system.
Definition	:	Curtain walling including all glass, panelling, louvres, trimmings, fixings, doors, ironmongery, decoration and other associated works.
Exclusions	:	

GROUP ELEMENT : 03 - SUPERSTRUCTURE

Element	:	IP - Internal Partitions
Unit	:	M ²
Rules	:	Measured the gross area of internal partitions between columns over door openings and borrowed lights.
Definition	:	Non-structural internal walls and partitions including glazed screens, demountable partitions, proprietary toilet and shower cubicles including doors to same. Liftshaft walls other than reinforced concrete.
Exclusions	:	Internal doors with fanlights and/or sidelights including doors in demountable partitions. Folding or sliding doors forming partitions, roller shutters (see ID). Fire stops and sound barriers in ceiling spaces (see IFCF). Wall finishes (see IFWF).

GROUP ELEMENT : 03 - SUPERSTRUCTURE

Element	:	ID - Internal Doors
Unit	:	Nr.
Rules	:	Measured the total number of doors.
Definition	:	All internal doors including frames, architraves, finishes, glazing, fanlights, sidelights, panels over doors (door sets) and ironmongery. Folding and sliding doors, fire doors, strongroom doors, roller shutter doors, wall hatches and duct doors.
Exclusions	:	Doors to proprietary toilet and shower cubicles, partitions etc. (see IP). Doors to fittings and fixtures (see FF).

GROUP ELEMENT : 03 - SUPERSTRUCTURE

Element	:	IF - Internal Finishes
Unit	:	M ²
Rules	:	Measured the actual area of internal finish.
Definition	:	Includes all necessary preparatory work (e.g. spatterdash), expansion joints, plasterbeads, stops and the like, and decoration.
Exclusions	:	

Sub-Element	:	IFWF - Wall Finishes
Unit	:	M ²
Rules	:	Measured the actual area of wall finish.
Definition	:	Includes plaster, tiles, linings, insulation and grounds behind linings and other decorations; skirtings, dado rails and the like. Finishes to stairwell walls.
Exclusions	:	Finishes to demountable partitions (see IP). Cornices (see IFCF). Integral skirtings (see IFFF). Finishes to balustrades and handrails (see IFBF).

Sub-Element	:	IFFF - Floor Finishes
Unit	:	M ²
Rules	:	Measured the actual area of floor finish.
Definition	:	Includes screeds, surface finishes, integral skirtings (i.e. same material as floor finish), matwells, threshold and junction strips. False floors laid over structural floors (e.g. computer flooring).
Exclusions	:	Stair finishes to treads, risers and intermediate landings.

Sub-Element	:	IFCF - Ceiling Finishes
Unit	:	M ²
Rules	:	Measured the actual area of ceiling finish.
Definition	:	Includes suspended ceilings, framings and supports, ceiling and beam linings, insulation and grounds behind linings, cornices, ceilings access panels, fire stops and sound barriers in ceiling spaces together with framing.
Exclusions	:	Soffits of stairs and intermediate landings (see IFSF).

Element : IF - Internal Finishes cont' d

Sub-Element	:	IFSF - Stair Finishes
Unit	:	M ²
Rules	:	Measured the gross plan area at each level including intermediate landings.
Definition	:	Finishes to treads and risers including nosings, landings, strings and aprons, and soffits of stairs and landings.
Exclusions	:	Finishes to landings at floor levels (see IFFF) and to stairwell walls (see IFWF).

Sub-Element	:	IFBF - Balustrade & Handrail Finishes
Unit	:	M ²
Rules	:	Measured the actual area of balustrade and handrail finish.
Definition	:	Finishes to balustrading and handrails including both sides and top of balustrading.
Exclusions	:	

Sub-Element	:	IFSU - Internal Finishes Sundries
Unit	:	ITEM
Rules	:	
Definition	:	Includes finishes to art works and the like.
Exclusions	:	

GROUP ELEMENT : 03 - SUPERSTRUCTURE

Element	:	EF - External Finishes
Unit	:	M ²
Rules	:	Measured the actual area of external finish.
Definition	:	Includes all necessary preparatory work (e.g. spatterdash), expansion joints, plasterbeads, stops and the like, and decoration.
Exclusions	:	

Sub-Element	:	EFRF - Roof Finishes
Unit	:	M ²
Rules	:	Measured the actual area of roof finish.
Definition	:	Complete weather-proof covering to all types of roofs, balconies and decks including coverings, sheetings, flashings, skirtings, gutters, screeds and insulation.
Exclusions	:	Tile or other types of finish placed on top of the water-proofing when roof, balcony or deck is used for foot traffic and the like (see EFFF).

Sub-Element	:	EFWF - Wall Finishes (External)
Unit	:	M ²
Rules	:	Measured the actual area of wall finish.
Definition	:	Includes finishes to all fins and other features including both sides and top of balcony and parapet walls. Skirtings, dado rails and the like.
Exclusions	:	

Sub-Element	:	EFFF - Floor Finishes (External)
Unit	:	M ²
Rules	:	Measured the actual area of floor finish.
Definition	:	Finishes to roofs, balconies and decks where exposed to foot traffic and the like.
Exclusions	:	Weather-proofing to roofs, balconies and decks (see EFRF).

Sub-Element	:	EFCF - Ceiling Finishes (External)
Unit	:	M ²
Rules	:	Measured the actual area of ceiling finish.
Definition	:	Finishes to external soffits, balcony soffits and the like.
Exclusions	:	Finishes to soffits of projecting fins, planters etc. on external walls (see EFWF).

Element : EF - External Finishes cont' d

Sub-Element	:	EFSF - Stair Finishes (External)
Unit	:	M ²
Rules	:	Measured the gross plan area at each level including intermediate landings.
Definition	:	Finishes to treads and risers including nosings, landings, strings, aprons and soffits of stairs and landings.
Exclusions	:	Finishes to landings at floor levels (see EFFF) and to stairwell walls (see EFWF).

Sub-Element	:	EFBF - Balustrade & Handrail Finishes (External)
Unit	:	M ²
Rules	:	Measured the actual area of balustrade and handrail finish.
Definition	:	Finishes to balustrading and handrails including both sides and top of balustrading.
Exclusions	:	

Sub-Element	:	EFSU - External Finishes Sundries
Unit	:	ITEM
Rules	:	
Definition	:	Includes finishes to art works and the like.
Exclusions	:	

GROUP ELEMENT : 03 - SUPERSTRUCTURE

Element	:	FF - Fittings and Fixtures
Unit	:	M ²
Rules	:	Construction floor area - measured overall to the outer face of external wall.
Definition	:	Includes wardrobes, cupboards, shelving, shelving units, sinks, vanity and bench units, lockers, fixed desks, cloakroom fittings, benches and seating, counters, bars, chalkboards, projection screens, notice boards, curtain track and pelmets, mirrors, towel rails, hose reel cabinets, storage racks and the like. Cat ladders, cat walks and the like. All finishes.
Exclusions	:	Sanitary fittings (see SVSF). Electrical fittings (see EEEL). Services to fittings and fixtures (see SV, EE, AC, TG, FS & SP).

GROUP ELEMENT : 03 - SUPERSTRUCTURE

Element	:	SV - Plumbing Services
Unit	:	M ²
Rules	:	Construction floor area - measured overall to the outer face of external wall.
Definition	:	Water supply services, sanitary fittings and waste plumbing, including rainwater and refuse disposal.
Exclusions	:	Site mains (see XWES), water connections (see XWUC) and concrete roof tanks (see SCSU).

Sub-Element	:	SVRW - Rainwater Installation
Unit	:	M
Rules	:	Measured the gross length of all rainwater pipes and gutters.
Definition	:	Eaves gutters and down pipes.
Exclusions	:	Integral roof gutters (see SCRF & EFRF).

Sub-Element	:	SVSF - Sanitary Fittings
Unit	:	Nr.
Rules	:	The total number of sanitary fittings.
Definition	:	Sanitary fittings including sinks, basins, WCs, urinals, complete with taps, traps, cisterns etc.
Exclusions	:	Special kitchen equipment (see SPKE).

Sub-Element	:	SVSW - Soil and Waste Installation
Unit	:	Nr.
Rules	:	The total number of individual soil sanitary fittings.
Definition	:	Includes all types of pipes, fittings and fixings; support systems.
Exclusions	:	

Sub-Element	:	SVCW - Cold Water Installation
Unit	:	Nr.
Rules	:	The total number of individual outlets.
Definition	:	Includes all types of pipes, fittings and fixings; support systems.
Exclusions	:	

Element : SV - Plumbing Services cont' d

Sub-Element	:	SVHW - Hot Water Installation
Unit	:	Nr.
Rules	:	The total number of individual outlets.
Definition	:	Includes all types of pipes, fittings and fixings; support systems.
Exclusions	:	

Sub-Element	:	SVFW - Flushing Water Installation
Unit	:	Nr.
Rules	:	The total number of individual outlets.
Definition	:	Includes all types of pipes, fittings and fixings; support systems.
Exclusions	:	

Sub-Element	:	SVFF - Fire Fighting Installation
Unit	:	ITEM
Rules	:	
Definition	:	The main riser to the roof tanks.
Exclusions	:	Sprinkler system. Feeds to hose reels etc. (see FS). Hose reel cabinets (see FF). Alarm systems (see FS).

Sub-Element	:	SVRD - Refuse Disposal
Unit	:	Nr.
Rules	:	Measured the total number of refuse disposal hoppers.
Definition	:	Refuse chutes, fittings and fixtures.
Exclusions	:	

Sub-Element	:	SVSU - Plumbing Services Sundries
Unit	:	ITEM
Rules	:	
Definition	:	Includes connecting client provided appliances and the like.
Exclusions	:	

GROUP ELEMENT : 03 - SUPERSTRUCTURE

Element	:	BB - Builder's Work in Connection with Services
Unit	:	Item
Rules	:	
Definition	:	All items required to be carried out by the builder as a direct result of a services or specialist services installation. All holes, pipe sleeves, etc. and the like. Painting on pipes.
Exclusions	:	Service ducts below ground floor slab (see FNSU). External services trenches (see XWES). Water tanks (see SCSU).

GROUP ELEMENT : 03 - SUPERSTRUCTURE

Element	:	BP - Builder's Profit & Attendance on Mechanical & Electrical Services
Unit	:	ITEM
Rules	:	
Definition	:	Sum required by builder for profit and attendance on nominated subcontractors and separate contracts.
Exclusions	:	

GROUP ELEMENT : 04 - MECHANICAL & ELECTRICAL SERVICES

Element	: EE - Electrics
Unit	: ITEM
Rules	:
Definition	: Includes for all works associated with the supply of electrical power. Additionally those works involved with the provision of call bell system and lightning protection system.
Exclusions	: Utility connections (see XWUC). Builder's work (see BB & BP).

Sub-Element	: EEML - Incoming Mains
Unit	: kVA
Rules	: Total maximum designed capacity of the incoming mains.
Definition	: Includes for all works in connection with incoming electricity supply.
Exclusions	: Utility connections (see XWUC). Builder' s work (see BB & BP).

Sub-Element	: EEMD - Main & Submain
Unit	: Nr.
Rules	: Measured the total number of local distribution boards.
Definition	: Includes for all works for the distribution of electricity from the main low voltage switchboard to submain and final circuit distribution boards or equipment including busbar trunkings, cables, cabling facilities, switchgears and distribution boards.
Exclusions	: Builder's work (see BB & BP).

Element : EE - Electrics cont' d

Sub-Element	: EELP - Lighting and Power
Unit	: Item
Rules	:
Definition	: Includes for all works for the installation of lighting points, power points, luminaires, accessories and electrical appliances including trunkings, cables and cabling facilities .
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: EECC – Call Bell System
Unit	: Nr.
Rules	: Measured the total number of outlet points.
Definition	: Includes for all works associated with the installation of call bell system
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: EEOS - Electrical Works associated with Other Services
Unit	: Nr
Rules	: Measured the total number of outlet points
Definition	: Includes for all works associated with the installation of cabling facilities for other trades such as telephone and PABX system, public address system, CCTV system including the installation of trunkings, ducts, trays, cable ladders, conduits and outlet boxes.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: EETT - Trunking and Tray
Unit	: ITEM
Rules	:
Definition	: Includes for all works associated with the installation of cabling facilities associated with more than one system including the installation of trunkings, ducts, trays, cable ladders, conduits and outlet boxes.
Exclusions	: Builder's work (see BB & BP).

Element : EE - Electrics cont' d

Sub-Element	: EEPR - Lightning Protection
Unit	: M ²
Rules	: Roof area - measured overall to the outer face of external wall.
Definition	: Includes for all works associated with the installation of lightning protection system including air termination, down conductors and earth electrodes.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: EEEB - Earthing and Bonding
Unit	: ITEM
Rules	:
Definition	: Includes for all works associated with the installation of earthing and bonding system including equipotential bonding and earth electrodes.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: EEGS - Items Supplied by Government
Unit	: ITEM
Rules	:
Definition	: Includes for all works associated with the fixing only of the items supplied by government.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: EESU - Electrics Sundries
Unit	: ITEM
Rules	:
Definition	: Includes for all miscellaneous work associated with the electrical installation including marking the position of holes, mortices, chases and the like in the structure, testing and commissioning, preparation of working drawings, builder's work drawings, "as fitted" drawings and design drawings, provision of mock-ups and/or prototypes, maintenance service other than that require under the defects liability as stipulated in the General Conditions of Contract, tuition of Employer's staff, provision of manuals, fabricated composite support structure, supply conduit and cable sleeves for fixing by other trades, and fire stopping.
Exclusions	: Builder's work (see BB & BP).

GROUP ELEMENT : 04 - MECHANICAL & ELECTRICAL SERVICES

Element	: SB – Low Voltage (LV) Cubicle Switchboards
Unit	: ITEM
Rules	:
Definition	: Includes for all work and sundry items in connection with the low voltage cubicle switchboards.
Exclusions	: Utility connection (see XWUC). Builder’s work (see BB & BP).

Sub-Element	: SBSI – LV Cubicle Switchboards Installation
Unit	: Ampere
Rules	: Total maximum current carrying capacity of the switchboards.
Definition	: Includes for all work in connection with the low voltage cubicle switchboards.
Exclusions	: Utility connection (see XWUC). Builder’s work (see BB & BP).

Sub-Element	: SBSU – LV Cubicle Switchboards Installation Sundries
Unit	: ITEM
Rules	:
Definition	: Includes for all miscellaneous work associated with the low voltage cubicle switchboards installation including marking the position of holes, mortices, chases and the like in the structure, testing and commissioning, earthing and bonding, preparation of working drawings, builders’ work drawings, “as fitted” drawings and design drawings, provision of mock-ups and/or prototypes, maintenance service other than require under the defects liability as stipulated in the General Conditions of Contract, tuition of Employer’s staff , provision of manuals, supply conduit and cable sleeves for fixing by other trades, and fire stopping.
Exclusions	: Builder’s work (see BB & BP).

GROUP ELEMENT : 04 - MECHANICAL & ELECTRICAL SERVICES

Element	: GE – Diesel Generating Sets
Unit	: ITEM
Rules	:
Definition	: Includes for all work associated with the diesel generator sets installation and sundry items.
Exclusions	: Builder’ s work (see BB& BP).

Sub-Element	: GESI – Diesel Generating Sets Installation
Unit	: KVA
Rules	: Total maximum designed capacity of the diesel generator sets.
Definition	: Includes for all work associated with the diesel generator sets installation.
Exclusions	: Builder’ s work (see BB& BP).

Sub-Element	: GESU – Diesel Generating Sets Sundries
Unit	: ITEM
Rules	:
Definition	: Includes for all miscellaneous work associated with diesel generator sets installation including marking the position of holes, mortices, chases and the like in the structure, testing and commissioning, earthing and bonding, preparation of working drawings, builders’ work drawings, “as fitted” drawings and design drawings, provision of mock-ups and/or prototypes, maintenance service other than require under the defects liability as stipulated in the General Conditions of Contract, tuition of Employer’ s staff , provision of manuals, supply conduit and cable sleeves for fixing by other trades, and fire stopping.
Exclusions	: Builder’ s work (see BB & BP).

GROUP ELEMENT : 04 - MECHANICAL & ELECTRICAL SERVICES

Element	: UP – Uninterruptible Power Supply
Unit	: ITEM
Rules	:
Definition	: Includes for all work and sundry items associated with the installation of uninterruptible power supply system.
Exclusions	: Builder’ s work (see BB & BP).

Sub-Element	: UPSI – Uninterruptible Power Supply System
Unit	: KVA
Rules	: Total maximum designed capacity of the uninterruptible power supply equipment.
Definition	: Includes for all work associated with the installation of uninterruptible power supply system.
Exclusions	: Builder’ s work (see BB & BP).

Sub-Element	: UPSU – Uninterruptible Power Supply System Sundries
Unit	: ITEM
Rules	:
Definition	: Includes for all miscellaneous work associated with uninterruptible power supply system installation including marking the position of holes, mortices, chases and the like in the structure, testing and commissioning, earthing and bonding, preparation of working drawings, builders’ work drawings, “as fitted” drawings and design drawings, provision of mock-ups and/or prototypes, maintenance service other than require under the defects liability as stipulated in the General Conditions of Contract, tuition of Employer’ s staff , provision of manuals, supply conduit and cable sleeves for fixing by other trades, and fire stopping.
Exclusions	: Builder’ s work (see BB & BP).

GROUP ELEMENT : 04 - MECHANICAL & ELECTRICAL SERVICES

Element	: CB – Broadcast Reception
Unit	: ITEM
Rules	:
Definition	: Includes for all work and sundry items associated with the installation of broadcast reception system.
Exclusions	: Builder’ s work (see BB & BP).

Sub-Element	: CBSI – Broadcast Reception Installation
Unit	: Nr.
Rules	: Measured the total number of service points.
Definition	: Includes for all work associated with the installation of broadcast reception system.
Exclusions	: Builder’ s work (see BB & BP).

Sub-Element	: CBSU – Broadcast Reception Installation Sundries
Unit	: ITEM
Rules	:
Definition	: Includes for all miscellaneous work associated with broadcast reception installation including marking the position of holes, mortices, chases and the like in the structure, testing and commissioning, earthing and bonding, preparation of working drawings, builders’ work drawings, “as fitted” drawings and design drawings, provision of mock-ups and/or prototypes, maintenance service other than require under the defects liability as stipulated in the General Conditions of Contract, tuition of Employer’ s staff, provision of manuals, supply conduit and cable sleeves for fixing by other trades, and fire stopping.
Exclusions	: Builder’ s work (see BB & BP).

GROUP ELEMENT : 04 - MECHANICAL & ELECTRICAL SERVICES

Element	: AC - Air Conditioning
Unit	: ITEM
Rules	:
Definition	: Includes for all works associated with the provision of mechanical ventilation and air-conditioning including all pipework, insulation, ducting, fan motors, chillers and other plant and equipment, including boilers and unitary air conditioners.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: ACCH - Chilled Water System
Unit	: kW
Rules	: Measured the total cooling capacity of chillers.
Definition	: Includes for all works associated with the chilled water system including chillers, water pumps, all pipework, fittings, insulation and valves.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: ACCW - Condenser Water System
Unit	: kW
Rules	: Measured the total heat rejection capacity of condensers.
Definition	: Includes for all works associated with the condenser water system including condensers, water pumps, all pipework, fittings and valves.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: ACHW - Heating Water System
Unit	: kW
Rules	: Measured the total heating capacity of heating water system.
Definition	: Includes for all works associated with the heating water system including hot water boilers, flue, calorifiers, water pumps, all pipework, fittings, valves and insulation.
Exclusions	: Builder's work (see BB & BP).

Element : AC - Air conditioning cont' d

Sub-Element :	ACSC - Steam and Condensate System
Unit :	kW
Rules :	Measured the total heating capacity of the steam supply system.
Definition :	Includes for all works associated with the steam and condensate system including steam boilers, flue, calorifiers, water pumps, all pipework, fittings, insulation, valves and steam traps.
Exclusions :	Builder's work (see BB & BP).

Sub-Element :	ACFO - Fuel Oil System
Unit :	ITEM
Rules :	
Definition :	Includes for all works associated with the provision of fuel oil supply to heating water system and steam supply system including fuel storage tank, fuel pumps, all pipework, fittings and valves.
Exclusions :	Builder's work (see BB & BP).

Sub-Element :	ACWT - Water Treatment
Unit :	ITEM
Rules :	
Definition :	Includes for all works and services associated with water treatment of air conditioning system including metering pumps, chemical storage, electrochemical chlorinator, pipework, fittings and valves.
Exclusions :	Builder's work (see BB & BP).

Sub-Element :	ACAC - Air Handling and Distribution System
Unit :	kW
Rules :	Measured the total cooling capacity of air handling equipment.
Definition :	Includes for all works associated with air handling and distribution installation including air handling units, fan coil units, variable air volume boxes, ventilation fans, air grilles and registers, air ducts, insulation, filters and dampers.
Exclusions :	Builder's work (see BB & BP).

Element : AC - Air conditioning cont' d

Sub-Element	: ACCD - Condensate Drain System
Unit	: ITEM
Rules	:
Definition	: Includes for all works associated with condensate drain system including pipeworks, fittings, valves and insulation.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: ACUA - Unitary Air Conditioning System
Unit	: kW
Rules	: Measured the total cooling capacity of unitary air conditioning system.
Definition	: Includes for all works associated with unitary air conditioning system including condensing units, direct expansion units, pipework, fittings, valves and insulation.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: ACCR - Cold Rooms
Unit	: M ³
Rules	: Measured the total internal volume of cold rooms.
Definition	: Includes for all works associated with cold room installation including cold room, refrigeration plant, pipework, fittings, valves and insulation.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: ACMV - Mechanical Ventilation System
Unit	: ITEM
Rules	:
Definition	: Includes for all works associated with mechanical ventilation installation including ventilation fans, ductwork, air grilles and registers, filters, dampers and insulation.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: ACSV - Staircase Ventilation System
Unit	: M ²
Rules	: Measured the actual floor area of the staircase.
Definition	: Includes for all works associated with staircase pressurisation installation including ventilation fans, ductwork, air grilles and registers, filters and dampers.
Exclusions	: Builder's work (see BB & BP).

Element : AC - Air conditioning cont' d

Sub-Element	: ACKE - Kitchen Exhaust System
Unit	: M ²
Rules	: Measured the actual floor area of kitchen.
Definition	: Includes for all works associated with kitchen ventilation and kitchen exhaust purification installation including water scrubbers, exhaust hoods, hydro-vent units, roof extractors, ventilation fans, ductwork, air grilles and registers, filters and dampers.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: ACSE - Special Exhaust System
Unit	: ITEM
Rules	:
Definition	: Includes for all works associated with ventilating installation specifically designed for removal of toxic fumes or irritating gases including vehicular exhausts, bio-incinerator exhausts, ventilation fans, ductwork, air grilles and registers, filters and dampers.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: ACEC - Electrical and Control System
Unit	: Percentage
Rules	: Measured the percentage value of electrical and control system cost to total air conditioning installation cost.
Definition	: Includes for all works associated with the provision of electrical supply and control of the total air conditioning installation including control cubicle and panels, power and control cables, cabling facilities, sensing devices, central control and monitoring equipment.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: ACSU - Air conditioning Sundries
Unit	: Item
Rules	:
Definition	: Includes for all miscellaneous work associated with the air conditioning installation including marking the position of holes, mortices, chases and the like in the structure, testing and commissioning, preparation of working drawings, builder's work drawings, "as fitted" drawings and design drawings, provision of mock-ups and/or prototypes, maintenance service other than that require under the defects liability as stipulated in the General Conditions of Contract, tuition of Employer's staff, provision of manuals, fabricated composite support structure, supply conduit, cable and pipe sleeves for fixing by other trades and fire stopping.
Exclusions	: Builder's work (see BB & BP).

GROUP ELEMENT : 04 - MECHANICAL & ELECTRICAL SERVICES

Element	: TG - Gas Installation
Unit	: Nr.
Rules	: Measured the total number of individual service points.
Definition	: Includes for all works associated with the provision of piped or bottle gas including distribution pipework, meters and equipment.
Exclusions	: Utility connection (see XWUC). Builder's work (see BB & BP).

Element	: FS - Fire Services
Unit	: ITEM
Rules	:
Definition	: Includes for all works associated with fire fighting, detection, alarming and advisory installation.
Exclusions	: Utility connections (see XWUC). Main riser to roof tanks (see SVFF). Fire stops in ceilings (see IFCF). Builder's work (see BB & BP).

Sub-Element	: FSHH - Fire Hydrant & Hosereel System
Unit	: ITEM
Rules	:
Definition	: Includes for all works associated with fire hydrant and hosereel installation including pipework, fittings, valves, water pumps, hydrant outlets, fire services inlets and hosereels.
Exclusions	: Builder's work (see BB & BP)

Sub-Element	: FSSS - Sprinkler System
Unit	: Nr.
Rules	: Measured the total number of sprinkler heads.
Definition	: Includes for all works associated with water sprinkler installation including pipework, fittings, valves, sprinkler heads, water pumps, sprinkler water inlets.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: FSGE - Gaseous Extinguishing System
Unit	: Nr.
Rules	: Measured the total number of gas nozzles
Definition	: Includes for all works associated with gas extinguishing installation including gas cylinders, cylinder racks and fixings, pipework, fittings, valves and nozzles.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: FSAV - Audio/Visual Advisory System
Unit	: ITEM
Rules	:
Definition	: Includes for all works associated with audio/visual advisory system including microphones, amplifiers, loudspeakers, cassette decks, CD decks, visual directional signs and audio/visual control equipment.
Exclusions	: Builder's work (see BB & BP).

Element : FS - Fire Services cont' d

Sub-Element :	FSAD - Automatic Fire Alarm & Detection System
Unit :	ITEM
Rules :	
Definition :	Includes for all works associated with automatic fire alarm and detection installation including detectors and alarm signalling devices.
Exclusions :	Builder's work (see BB & BP).

Sub-Element :	FSPA - Portable Hand-operated Appliances
Unit :	ITEM
Rules :	
Definition :	Includes for all hand held fire fighting equipment.
Exclusions :	Builder's work (see BB & BP).

Sub-Element :	FSES - Electricity Supply
Unit :	ITEM
Rules :	
Definition :	Includes for all works associated with the provision of electricity supply to the fire services installation including power cables, cabling facilities and starters.
Exclusions :	Builder's work (see BB & BP).

Sub-Element :	FSCS - Control System
Unit :	Nr.
Rules :	Measured the total number of equipment control points.
Definition :	Includes for all works associated with control system of the fire service installation including control cables, cabling facilities and control panels.
Exclusions :	Builder's work (see BB & BP).

Element : FS - Fire Services cont' d

Sub-Element	:	FSSU - Fire Services Sundries
Unit	:	ITEM
Rules	:	
Definition	:	Includes for all miscellaneous work associated with the fire service installation including marking the position of holes, mortices, chases and the like in the structure, testing and commissioning, preparation of working drawings, builder' s work drawings, "as fitted" drawings and design drawings, provision of mock-ups and/or prototypes, maintenance service other than that require under the defects liability as stipulated in the General Conditions of Contract, tuition of Employer's staff, provision of manuals, fabricated composite support structure, cable and pipe sleeves for fixing by other trades and fire stopping.
Exclusions	:	Builder's work (see BB & BP).

GROUP ELEMENT : 04 - MECHANICAL & ELECTRICAL SERVICES

Element	: MS - Horizontal and Vertical Movement Systems
Unit	: ITEM
Rules	:
Definition	: Includes lifts, escalators, conveyors and any other form of horizontal or vertical transportation system for people or goods.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: MSLF - Lifts
Unit	: Nr.
Rules	: Measured the total number of lifts.
Definition	: Includes for all works associated with the installation of goods or passenger lifts and hoists.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: MSCO - Conveyors
Unit	: Nr.
Rules	: Measured the total number of conveyors.
Definition	: Includes for all works associated with for the installation of a conveyor system.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: MSES - Escalators
Unit	: Nr.
Rules	: Measured the total number of escalators.
Definition	: Includes for all works associated with the provision of escalators.
Exclusions	: Builder's work (see BB & BP).

GROUP ELEMENT : 04 - MECHANICAL & ELECTRICAL SERVICES

Element : BA - Building Automation

Unit : ITEM

Rules :

Definition : Includes for all works necessary for the installation of a building automation system including wiring, conduit, trunking, outlets, equipment etc.

Exclusions : Builder's work (see BB & BP).

GROUP ELEMENT : 04 - MECHANICAL & ELECTRICAL SERVICES

Element	: SP - Other Specialist Services
Unit	: ITEM
Rules	:
Definition	: Includes for all other specialist services installations not already mentioned above for example, kitchen equipment, specialist medical gases, steam/hot water boilers and other mechanical plant and equipment and the like.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: SPKE - Kitchen Equipment
Unit	: ITEM
Rules	:
Definition	: Includes for all works associated with the installation of kitchen equipment.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: SPOS - Other Specialist Installations
Unit	: ITEM
Rules	:
Definition	: Includes for all works associated with specialist medical gases, steam/hot water boiler installations and the like.
Exclusions	: Builder's work (see BB & BP).

Sub-Element	: SPME - Mechanical Plant and Equipment
Unit	: ITEM
Rules	:
Definition	: Includes such items as gondolas, turnstiles, weighbridges, turntables and the like.
Exclusions	: Builder's work (see BB & BP).

GROUP ELEMENT : 05 - EXTERNAL WORKS AND DRAINAGE

Element	: XW - External Works
Unit	: M ²
Rules	: Measured the gross area of the site excluding the plan area of the building.
Definition	: Site works beyond the line of the external face of the building structure.
Exclusions	: Bulk excavation for site formation (see SF).

Sub-Element	: XWSP - Site Preparation
Unit	: M ²
Rules	: Measured the gross area of the site excluding the plan area of the building.
Definition	: Includes site clearance and demolition.
Exclusions	: Bulk excavation for site formation (see SF).

Sub-Element	: XWRS - Retaining Structures
Unit	: M ²
Rules	: Measured the gross vertical area of the retaining wall.
Definition	: Retaining walls, crib walls and the like.
Exclusions	:

Element	: XWSE - Site Enclosures and Divisions
Unit	: M ²
Rules	: Measured the gross vertical area of the enclosure.
Definition	: All types of fencing and screen walls constructed in any material.
Exclusions	:

Sub-Element	: XWRO - Roads and Pavings
Unit	: M ²
Rules	: Measured the gross area on plan over all openings.
Definition	: Any form of road, path, track, highway, parking area including excavation, filling, sub-base, paving material, surface finish, kerbs and road channels. Includes road markings and signs. Highways Office run-in charges.
Exclusions	: Drainage (see DR) - other than road channels.

Element : XW - External Works cont' d

Element :	XWHL - Hard Landscaping
Unit :	M ²
Rules :	Measured the gross area of hard landscaping.
Definition :	Flower boxes, planters, integral seating, ornamental ponds etc. and the like.
Exclusions :	

Sub-Element :	XWSL - Soft Landscaping
Unit :	M ²
Rules :	Measured the gross area of soft landscaping.
Definition :	Includes all grassed and planted areas, trees, shrubs, plants and the like.
Exclusions :	

Sub-Element :	XWFE - Fittings and Equipment
Unit :	Nr.
Rules :	Measured the total number of individual items.
Definition :	Playground equipment, individual benches, seats and the like.
Exclusions :	

Sub-Element :	XWES - External Services
Unit :	M
Rules :	Measured the gross length of all services pipes and/or cables.
Definition :	Includes trenches, pipes and cables for incoming water mains, gas, electricity, telephone etc., backfilling, protection, reinstatement as necessary.
Exclusions :	

Element :	XWUC - Utility Connections
Unit :	ITEM
Rules :	
Definition :	Includes all connection charges for any incoming service.
Exclusions :	Drainage connections (see DRDC).

Element : XW - External Works cont' d

Sub-Element	:	XWAN - Ancillary Structures
Unit	:	Nr.
Rules	:	Measured the total number of individual structures.
Definition	:	Includes dangerous goods stores, guard houses, dog kennels, covering to carspaces, garages, elevated walkways and the like.
Exclusions	:	

GROUP ELEMENT : 05 - EXTERNAL WORKS AND DRAINAGE

Element	: DR - Drainage
Unit	: ITEM
Rules	:
Definition	: Generally covers all soil and surface water drainage, manholes, channels and catchpits; drainage connections.
Exclusions	: Kerbs and channels to roads (see XWRO).

Sub-Element	: DRSW - Soil and Surface Water
Unit	: M
Rules	: Measured the gross length of all pipe runs.
Definition	: Includes trenches, backfilling, pipes, haunching and surrounds.
Exclusions	:

Sub-Element	: DRMH - Manholes
Unit	: Nr.
Rules	: Measured the total number of individual units.
Definition	: Includes manholes, inspection chambers, soakaways and the like.
Exclusions	: Septic tanks (see DRST).

Sub-Element	: DRST - Sewage Treatment
Unit	: ITEM
Rules	:
Definition	: Includes all forms of sewage treatment, e.g. septic tanks, filtration beds and the like.
Exclusions	:

Sub-Element	: DRCH - Channels
Unit	: M
Rules	: Measured the gross length of all channels.
Definition	: Includes all surface water channels and the like, gratings and covers.
Exclusions	: Kerbs and channels to roads (see XWRO)

GROUP ELEMENT : 05 - EXTERNAL WORKS AND DRAINAGE

Element : DR - Drainage cont' d

<p>Sub-Element : DRCP - Catchpits</p> <p>Unit : Nr.</p> <p>Rules : Measured the total number of individual units.</p> <p>Definition : Includes catchpits and the like in connection with surface water drainage, gratings and covers.</p> <p>Exclusions :</p>
--

<p>Sub-Element : DRDC - Drainage Connections</p> <p>Unit : ITEM</p> <p>Rules :</p> <p>Definition : Includes all connection charges between the last connecting manhole or catchpit etc. and the sewer or outfall.</p> <p>Exclusions :</p>
--

GROUP ELEMENT : 06 - SITE DEVELOPMENT

Element : SI - Site Investigation

Unit : ITEM

Rules :

Definition : Site and geotechnical investigation.

Exclusions :

GROUP ELEMENT : 06 - SITE DEVELOPMENT

Element : SF - Site Formation

Unit : M³

Rules : Measured as the absolute gross volume of excavation and/or fill.

Definition : Site formation and geotechnical works e.g. slope stabilisation.

Exclusions :

GROUP ELEMENT : 06 - SITE DEVELOPMENT

Element : PI - Piling
Unit : Item
Rules :
Definition : Includes all types of driven or bored piles and sheet piling.
Exclusions :

Sub-Element : PISP - Sheet Piling
Unit : M²
Rules : Measured the actual area supported.
Definition : Includes all necessary works in connection with temporary and permanent sheet piling.
Exclusions :

Sub-Element : PIPP - Driven or Bored Piling
Unit : M
Rules : Measured the total length of driven or bored piles in place (stating the average size/diameter).
Definition : Includes all types of driven or bored piles.
Exclusions :

GROUP ELEMENT : 06 - SITE DEVELOPMENT

Element	: CS - Caissons
Unit	: ITEM
Rules	:
Definition	: Generally includes hand dug and large diameter driven caissons, contiguous walls, and associated rock anchors and the like.
Exclusions	:

Sub-Element	: CSCP - Caisson Piling
Unit	: M
Rules	: Measured the total length (stating the diameter and whether hand dug or bored).
Definition	: Includes hand dug and large diameter driven caissons.
Exclusions	:

Sub-Element	: CSCW - Caisson Contiguous Walls
Unit	: M ²
Rules	: Measured the actual area supported (stating whether hand dug or bored).
Definition	: Includes hand dug and/or large diameter driven caisson contiguous walls and associated rock anchors and the like.
Exclusions	:

GROUP ELEMENT : 07 - STORES, FURNITURE & EQUIPMENT

Element : GS - Government Stores
Unit : ITEM
Rules :
Definition : Includes all items supplied by Government Supplies Department including indent items.
Exclusions : Fix only is taken with the appropriate element.

Sub-Element : GSBY - Building Stores
Unit : ITEM
Rules :
Definition : Ironmongery, sanitary fittings, manhole covers and the like supplied by Government Supplies Department.
Exclusions : Fix only is taken with the appropriate element.

Sub-Element : GSBZ - Mechanical & Electrical Services Stores
Unit : ITEM
Rules :
Definition : Items required by the Government Building Services Engineer supplied by Government Supplies Department.
Exclusions : Fix only is taken with the appropriate element. Domestic appliances (see FEDA).

GROUP ELEMENT : 07 - STORES, FURNITURE & EQUIPMENT

Element : **FE - Furniture and Equipment**
Unit : ITEM
Rules :
Definition : Includes those items required by the client (Government) department and domestic appliances.
Exclusions :

Sub-Element : FECL - Client Department
Unit : ITEM
Rules :
Definition : Items required by the client (Government) department to be charged to Furniture & Equipment within the project vote.
Exclusions :

Sub-Element : FEDA - Domestic Appliances
Unit : ITEM
Rules :
Definition : Domestic appliances required by the Government Building Services Engineer to be charged to Furniture & Equipment within the project vote.
Exclusions :

GROUP ELEMENT : 08 - CONSULTANT' S FEES

Element : CF - Consultant' s Fees
Unit : ITEM
Rules :
Definition : All fees to be charged by the various consultants employed on the project.
Exclusions :

Sub-Element : CFGX - Geotechnical Consultants
Unit : ITEM
Rules :
Definition : All fees chargeable for the specialist services.
Exclusions :

Sub-Element : CFAR - Architectural Consultants
Unit : ITEM
Rules :
Definition : All fees chargeable for the specialist services.
Exclusions :

Element : CFST - Structural Consultants
Unit : ITEM
Rules :
Definition : All fees chargeable for the specialist services.
Exclusions :

Sub-Element : CFBS - Building Services Consultants
Unit : ITEM
Rules :
Definition : All fees chargeable for the specialist services.
Exclusions :

GROUP ELEMENT : 08 - CONSULTANT' S FEES

Sub-Element	: CFQS - Quantity Surveying Consultants
Unit	: ITEM
Rules	:
Definition	: All fees chargeable for the specialist services.
Exclusions	:

Element	: CFOO - Other Specialist Consultants
Unit	: Item
Rules	:
Definition	: All fees chargeable for the specialist services.
Exclusions	:

GROUP ELEMENT : 09 - CONTINGENCY

Element : CY - Contingency

Unit : ITEM

Rules :

Definition : A sum to be set aside for any unforeseeable circumstances.

Exclusions :

INDEX

Subject	Page
Air conditioning Sundries	32
Air conditioning	29
Air Handling and Distribution System	30
Ancillary Structures	42
Architectural Consultants	51
Audio/Visual Advisory System	34
Automatic Fire Alarm & Detection System	35
Balustrade & Handrail Finishes	14
Balustrades & Handrail Finishes (External)	16
Balustrades & Handrails (Other)	7
Balustrades & Handrails (Reinforced Concrete)	5
Basements	2
Broadcast Reception	28
Broadcast Reception System	28
Broadcast Reception System Sundries	28
Builder's Profit & Attendance on M & E Services	21
Builder's Work in Connection with Services	20
Building Automation	38
Building Services Consultants	51
Building Stores	49
Caisson Contiguous Walls	48
Caisson Piling	48
Caissons	48
Call Bell System	23
Catchpits	44
Ceiling Finishes	13
Ceiling Finishes (External)	15
Channels	43
Chilled Water System	29
Client Department (F&E)	50
Cold Rooms	31
Cold Water Installation	18
Consultant's Fees	51
Condensate Drain System	31
Condenser Water System	29
Contingency	53
Control System	35
Conveyors	37
Curtain Walling	10
Diesel Generating Sets	26
Diesel Generating Sets Installation	26
Diesel Generating Sets Installation Sundries	26
Domestic Appliances (F&E)	50
Drainage	43
Drainage Connections	44
Driven & Bored Piling	47
Earthing and Bonding	24
Electrical Works associated with Other Services	23
Electrical and Control System	32
Electrics Sundries	24
Electricity Supply	35
Electrics	22
Element Cost Model	(v)
Escalators	37
External Finishes	15
External Finishes Sundries	16
External Services	41
External Walls (Non-structural)	8
External Works	40

Fire Fighting Installation	19
Fire Hydrant & Hosereel System	34
Fire Services Sundries	36
Fire Services	34
Fittings and Fixtures	17
Fittings & Equipment (External Works)	41
Floor Finishes	13
Floor Finishes (External)	15
Flushing Water Installation	19
Foundation Sundries	3
Foundations	2
Frame (Other)	6
Frame (Reinforced Concrete)	4
Fuel Oil System	30
Furniture & Equipment	50
Gas Installation	33
Gaseous Extinguishing System	34
Geotechnical Consultants	51
Government Stores	49
GROSS BUILDING COST	(iii)
GROSS PROJECT COST	(iii)
Ground Floor Slabs	2
Hard Landscaping	41
Heating Water System	29
Horizontal & Vertical Movement Systems	37
Hot Water Installation	19
Incoming Mains	22
Internal Doors	12
Internal Finishes	13
Internal Finishes Sundries	14
Internal Partitions	11
Items supplied by Government	24
Kitchen Equipment	39
Kitchen Exhaust System	32
Lifts	37
Lighting and Power	23
Lightning Protection	24
List of Elements	(vii)
Low Voltage (LV) Cubicle Switchboards	25
LV Cubicle Switchboards Installation	25
LV Cubicle Switchboards Installation Sundries	25
Main & Submain	22
Manholes	43
Mechanical Plant and Equipment	39
Mechanical & Electrical Services Stores	49
Mechanical Ventilation System	31
NET BUILDING COST	(iii)
NET PROJECT COST	(iii)
Other Specialist Consultants	52
Other Specialist Installations	39
Other Specialist Services	39
Piling	47
Plumbing Services	18
Plumbing Services Sundries	19
Portable Hand-operated Appliances	35
Preliminaries	1
Project Cost Model	(iv)

Quantity Surveying Consultants	52
Rainwater Installation	18
Refuse Disposal	19
Retaining Structures	40
Road & Pavings	40
Roof Finishes	15
Roof (Other)	6
Roof (Reinforced Concrete)	4
Rules of Measurement	(v)
Sanitary Fittings	18
Sewage Treatment	43
Sheet Piling	47
Site Enclosures and Divisions	40
Site Formation	46
Site Investigation	45
Site Preparation	40
Soft Landscaping	41
Soil & Surface Water	43
Soil & Waste Installation	18
Special Exhaust System	32
Sprinkler System	34
Stair Finishes	14
Stair Finishes (External)	16
Stairs & Landings (Other)	7
Stairs & Landings (Reinforced Concrete)	5
Staircase Ventilation System	31
Steam and Condensate System	30
Structural Consultants	51
Structural Elements (Foundations)	2
Structural Walls (Other)	6
Structural Walls (Reinforced Concrete)	5
Structure Sundries (Other)	7
Structure Sundries (Reinforced Concrete)	5
Structure (Other)	6
Structure (Reinforced Concrete)	4
Trunking and Tray	23
Uninterruptible Power Supply	27
Uninterruptible Power Supply System	27
Uninterruptible Power Supply System Sundries	27
Unitary Air conditioning System	31
Upper Floors (Other)	6
Upper Floors (Reinforced Concrete)	4
Utility Connections	41
Wall Finishes	13
Wall Finishes (External)	15
Water Treatment	30
Windows & External Doors	9