

SMM Revised Edition - Notes

Control engineering (Kenyatta University)



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CONTENTS

	<u>CONTENTS</u>	
SECTION		<u>PAGES</u>
Α	GENERAL RULES	
В	PRELIMINARIES	
	Preliminary particulars	
	Contracts particulars	
	General matters	
	Temporary works	
	Works by public bodies	
	Works by nominated sub-contractors	
	Goods and materials from nominated suppliers	
	Protecting and cleaning the works	
	Contingencies	
•	DEMOLITICALS AND ALTERATIONS	
С	DEMOLITIONS AND ALTERATIONS	
	General to Section C	
	Demolitions	
	Alterations	
	Sundries	
D.	EXCAVATIONS AND EARTHWORK	
	Generally to Section D	
	Site preparation	
	Excavation	
	Disposal of water	
	Planking and strutting	
	Hardcore filling	
E.	PILING	
	Generally to Section E	
	Wood or concrete piles	
	Contractor-designed concrete piles	
	Steel sheet piling	
F.	CONCRETE WORK	
	Generally to Section F	
	Plain concrete and reinforced concrete	
	Reinforcement	
	Formwork	
	Precast concrete units	
	Hollow block suspended Construction	
	Prestressed concrete	
	Precast prestressed units	
	Sundries	
	Sundices	
G.	WALLING	
G.	Generally to Section G	
	Walling in connection with boilers	
	Facework	
	Brick facework	
	Rubble walling	
	0	
	Masonry	
	Cast stonework	
	Clayware work	
	Sundries	
	Centering	
	Damp-proof courses	
	HADEDDIAMAG	
н.	UNDERPINNING	
	Generally to Section H	
	Work in all trades	
J.	ASPHALT WORK	
	Generally to Section J	
	Mastic asphalt	
K.	ROOFING	
	Generally to Section K	

Generally to Section K Slate of tile roofing

Corrugated or troughed sheet roofing

Thatch roofing

Roof decking

Bitumen-felt roofing

Sheet metal roofing

Sheet metal flashings and gutter linings and metal trims

L. CARPENTRY

Generally to Section L

Structural timbers

Boarding

Fillets grounds batterns and bracketing

Sundries

M. JOINERY

Generally to Section M

Flooring

Boarded or panelled linings, casing and partitions

Doors, windows, skylights and lanterns

Frames, sills and kerbs

Fillets, glazing and beads and grounds

Shelves, table-tops and seats

Draining-boards and backboards

Fittings and fixtures

Staircases

Standard units

Sundries

Ironmongery

N. STRUCTURAL STEELWORK

Generally to Section N

Grillages and girders

Stanchions, columns and portal frames

Roof members, braces, struts and rails

Sundries

P. METAL WORK

Generally to Section P

Work in plates, bars, section and tubes

Work in sheet metal

Work in wire mesh or expanded metal

Compose units

Standard units

Sundries

Q PLUMBING AND ENGINEERING INSTALLATIONS

Generally to Section Q

Gutterwork

Pipework

Ductwork

Equipment

Thermal insulation

Builders work

R. MECHANICAL ENGINERING INSTALLATION

Generally to Section R

Piped Systems

Conveying installations

Ductwork

S. ELECTRICAL INSTALLATION

Generally to Section S

Equipment and control gear

Conduits, trunking and tray

Cables and conductors Fittings and accessories

Sundries

Builder's work

protection

T FLOOR, WALL AND CEILING FINISHES

Generally to Section S
In-situ finishing's
Tile, slab or block finishing's
Plain sheet finishings
Beds and backings
Lathing and baseboarding
Suspended plain sheet linings with supporting metal work
Self-finished partitions

U. GLAZING

Generally Section U Glass in openings Leaded lights and copper lights in openings Patent glazing Dome-lights

V. PAINTING AND DECORATING

Generally to Section U
Painting and similar work
Polishing
Sign writing

W. DRAINAGE

Generally to Section V Work in all trades

X. LANDSCAPING

Generally to Section X

Y. ROADWORKS

Generally to Section Y

Z. FENCING

Generally to Section Z Opening-type fencing Close-type fencing Gates

SECTION A

GENERAL RULES

Bills of Quantities	A1		quantities shall fully describe and accurately represent the works to be executed. Work which be measured accurately shall be described as provision or given in a bill of approximate es.
Measurements	A2	(a)	Work shall be measured net as fixed in position and each measurement shall be taken to the nearest 10 mm (i.e. 5 millimeters and over shall be regarded as 10 millimeters less than 5 millimeters shall be disregarded). This rule shall not apply to any dimensions stated in descriptions
		(b)	Where minimum deductions of voids are dealt with in this document they shall refer only to openings or wants which are wholly within the boundaries of measured areas. Openings or voids/holes which are at the boundaries of measured areas shall always be the subject of deduction irrespective of size.
Description	А3	(a)	The order of stating dimensions in descriptions shall be consistent and generally in the sequence of length, width and height. Where that sequence is not appropriate or where ambiguity could arise, the dimensions shall be specifically identified.
		(b)	Unless otherwise specifically stated in the bill, or herein, the following shall be deemed to be included with all items:-
			i. Labour and call costs in connection therewith
			 Materials, goods and all costs in connection therewith (e.g. conveyance, delivery; unloading; storing; returning packings; handling; hoisting; lowering).
			iii. Fitting and fixing materials and goods in position
			iv. Use of plants and machinery
			v. Waste of materials.
			vi. Square cutting.
			vii. Establishment charges, overhead charges and profit
			viii. All taxes and duties
		(c)	Junctions between straight and curved work shall in all cases be deemed to be included with the work in which they occur.
		(d)	Notwithstanding the provisions in this document for labours to be given as linear items such labours may be given in the descriptions of any linear items of work in which they occur.
		(e)	Notwithstanding the provisions in this document for labours to be enumerated, such labour may be given in the description of any enumerated item of work on which they occur.
		(d)	Labours on existing work shall be so described
Sizes of pipes or the like	A4	conduits,	nis document requires the sizes of pipes and tubes (measured internally) and bars, cables, standards and the like (measured externally) to be stated, the actual size of the pipe, or the like shall be stated.
Quantities	A5	(a)	Where the unit of billing is the metre, kilogram or litre quantities shall be billed to the nearest whole unit. Fractions of a unit less than half shall be disregarded and all other fractions shall be regarded as whole units.
		(b)	Where the Bills of Quantities is subject to use of more than two identical units repeated, then the unit of billing shall be to the nearest two decimal places.
		(c)	Where application of this Clause would cause an entire item to be eliminated such item shall be enumerated stating the size or weight as appropriate
Provisional or prime	A6	Where tl	his document requires provisional or prime cost sums to be given in accordance with this

cost sums

Clause, the choice of term shall be made in conformity with the following definitions unless otherwise provided in the conditions of contract:-

- The term "provisional sum" shall mean a sum provided for work or for costs which cannot be entirely foreseen, defined or detailed at the time the tendering documents are issued.
- ii. The term "prime cost sum" shall mean a sum provided for work or services to be executed by a nominated sub-contractor, a statutory authority or a public undertaking or for materials or goods to be obtained from a nominated supplier. Such sum shall be deemed to be exclusive of any profit and any attendance required by the general contractor and provision shall be made for the addition thereof

Work under water A7 Work executed in or under water shall be so described stating whether canal, river or sea water and (where applicable) the levels of high and low water.

Work in compressed A8 Work executed in compressed air shall be so described stating the pressure and the methods of entry and exit.

(a) The term 'day work' shall mean work for which the contractor is to be paid on the basis of the cost of materials, labour and plant plus an agreed percentage for overheads and profit.

(b) Works shall be quantified as 'dayworks' where the works be measured in the normal way stipulated in this document. Such works shall be quantified as provided in clause 818 hereof

No departure shall be made from this Standard Method of Measurement except to meet the requirements of exceptional circumstances. In such cases, special methods may be adopted provided the principles laid down herein are observed. The rules of measurement adopted in these circumstances shall be clearly stated in the bills of quantities.

Departures from the Standard Method of Measurement

Α9

A10

Dayworks



SECTION B

PRELIMINARIES

PRELIMINARY PARTICULARS

		PRELIMINARY PARTICULARS
Name of Parties	B1	The names and addresses of the employer, the Architect, the Engineers, and the Quantity Surveyors shall be stated.
Description of site	B2	(a) The location of the site shall be described stating the mode of access. Attention shall be drawn to any limitations of working space and to any adjacent or abutting buildings.
		(b) Recommendations as to visiting the site and inspection of any trial holes shall be made stating where the keys may be obtained (if any required) and where the drawings and other documents may be inspected.
		(c) Where any restrictions are imposed on the use or disposal of any sand or gravel found on the site, particulars of the restrictions shall be given.
		(d) Where possession of the site will be given in sections, particulars shall be given.
Description of the works	В3	(a) A general description of the works shall be given
		(b) Where drawings are not supplied with the Bills the size of the building, the height above and below ground level and the number of storeys shall be given.
		(c) Where the works are required to be executed or completed in any specific order or in sections or phases particulars shall be given.
		CONTRACT PARTICULARS
Contract particulars	B4	(a) Particulars of the form and type of contract shall be given
		(b) Where the conditions of contract are standard (i.e. printed and published for general use), particulars of the edition to be used shall be given and a schedule of the clause headings shall be set out in the bill.
		(c) Where any other conditions of contract are used, a copy of the full conditions shall be supplied with the bill and a schedule of the clause headings shall be set out in the bill.
		(d) Where there is an appendix to the condition of contract requiring insertions to be made, a schedule of the insertions shall be set out in the bill.
		GENERAL MATTERS
Items for convenience in pricing	B5	For convenience in pricing, items for the following shall given where applicable unless they are covered by the schedules given in accordance with Clause B4 hereof.
		i. Plant, tools and vehicles
		ii. Safety, health and welfare of work people.
		 Notice and fees to local authorities and public undertakings.
		iv. Setting out the works
		v. General foreman
		vi. National insurances and pensions for work people
		vii. Holidays for work people
		viii. Transport for work people
		ix. Safeguarding the works, materials and plant against damage and theft.
		x. Maintenance of public and private roads.xi. Police regulations
		xi. Police regulations
Obligations imposed by Employer	B6	Any obligation or restriction that may be imposed on the contractor by the employer in respect of any matter not covered by any clause in the conditions of contract shall be given as an item stating the relevant particulars.
Water for the works	В7	Water for the works and temporary arrangements for storing and distributing shall be given as an item. Where water will be supplied free of cost to the contractor, particulars shall be given as to the available capacity, the source (e.g. public main; bore hole) and the location of the point of free supply.
Lighting and power for works	B8	Lighting and power for the works and temporary arrangements for distribution and for lighting of hoardings and the like shall be given as an item. Where electric current will be supplied free of cost to the contractor particulars shall be given as to the available capacity for voltage, type of supply (e.g., alternating; direct) and the location of the point of the free supply.

Contractor's liability	B9	(a)	The contractor's liability for risk of injury to persons and property and of damage to the works shall be given as an item unless it is covered by the schedules given in accordance with Clause B4 hereof.
		(b)	Where the employer requires the contractor to effect insurance in respect of the contractor's liability for any such risk, the relevant particulars shall be given unless covered by the schedules given in accordance with Clause B4 hereof.
		(c)	Where the employer intends to relieve the contractor of liability for any such risk, the relevant particulars shall be given unless covered by the schedules given in accordance with Clause B4 hereof.
Employers Liability	B10		e cost of insuring any liability of the employer is required to be included in the contract sum shall be given as a provisional or prime cost sum as Clause A7 hereof
			TEMPORARY WORKS
Temporary works	B11	_	away temporary works and making good after shall be deemed to be included
generally Temporary roads	B12	-	items. ry roads, tracks, hard-standings, crossings and the like shall be given as an item stating ant particulars.
Temporary buildings	B13	(a)	Temporary sheds, offices, messrooms, sanitary accommodation, and other temporary buildings for the use of the contractor shall be given as an item. Lighting, furniture, equipment and attendance shall be deemed to be included with the item.
		(b)	Temporary offices for the use of the architect, the engineers, the quantity surveyor, the clerk of works and any other person acting on behalf of the employer shall be given as an item stating the floor area required. Lighting, furniture, equipment and attendance shall be given in the description.
Temporary telephones	B14	Tempora	ry telephone facilities on the site shall be given as an item.
Temporary screens	B15	-	ry screens and the like shall be given as an item stating the area and any requirements g construction. Doors and windows in screens shall be given in the description.
Temporary hoardings and gantries	B16	(a)	Temporary fencing, hoardings, fans, planked footways, guard-rails gantries and the like as may be necessary for protecting the public, for the proper execution of the works and for meeting the requirements of any local or other authority shall be given as an item stating any conditions imposed by the employer regarding such matters as construction, access, decoration and advertisement.
		(b)	Such temporary works specifically required by the employer shall be given as items stating all relevant particulars.
General scaffolding	B17		General scaffolding for the works shall be given as an item
Dayworks	B18	(a)	The cost of labour in dayworks shall be given as sum; alternatively, a schedule of the different categories of labour may be given containing a provisional quantity of hours for each category.
		(b)	The cost of labour included in a sum or schedule shall include wages, bonuses and any allowances paid to operatives directly engaged on dayworks (including those operating mechanical plant and transport) in accordance with the appropriate employment agreement or where no such agreement exists, the actual payment made to the work people concerned.
		(c)	The cost of materials in dayworks shall be given as sum: alternatively a schedule may be given containing a provisional quantity of different materials.
		(d)	The cost of materials included in such a sum or schedule shall be the net invoiced price, including delivery to site.
		(e)	The cost of constructional plant employed exclusively in the dayworks shall be given as a sum: alternatively, a schedule of the different categories of plant may be given containing a provisional quantity of hours: or such other period of time as may be appropriate for each category.
		(f)	The cost of constructional plant included in such a sum or schedule shall include fuel, consumable stores, repairs, maintenance and insurance of plant.

- (g) An item shall be given for the addition of establishment charges, overheads and profit to each of the sums of schedules of labour, materials or plant.
- (h) Establishment charges, overheads and profit shall include:
 - i. Costs related to the employment of labour
 - ii. Cost related to the costs of materials including handling and waste in storage
 - iii. Contractors administrative arrangements
 - iv. Constructional plant except plant employed exclusively on dayworks
 - v. Contractors facilities
 - vi. Temporary woks
 - vii. Sundry items

WORKS BY PUBLIC BODIES

Works by Public bodies

B19

Works which may only be carried out by a local authority or a public undertaking (e.g. taking up and relaying public roads and footpaths; forming permanent crossings) shall each be given separately as provisional or prime cost sum as Clause A7 hereof.

WORKS BY NOMINATED SUB-CONTRACTORS

Works by nominated contractors

B20

B21

B23

B24

- (a) Works which are required to be carried out by a nominated sub-contractor shall be given as a provisional or prime cost sum as Clause A7 hereof.
- (b) Attendance on nominated sub-contractors shall be given as an item in each case and shall be deemed to include only allowing use of standing scaffolding, mess rooms, sanitary accommodation and welfare facilities, providing space for office accommodation and for storage of plant and materials; providing light and water for the work; clearing away rubbish. Special attendance shall be given as an item in each case giving particulars (e.g. unloading; storing; hoisting; placing in position; providing power; providing special scaffolding)
- (c) Builder's work in connection with works by nominated sub-contractors shall be given in accordance with the appropriate rules in this document. It is desirable for such work to be grouped together under a heading in each appropriate section of the bill.

GOODS AND MATERIALS FROM NOMINATED SUPPLIES

Goods from nominated supplies

- (a) Goods and materials which are required to be obtained from a nominated supplier shall be given as a provisional or prime cost sum as Clause A7 hereof.
- (b) Fixing only goods and materials shall be given in accordance with the appropriate rules in this document. Unloading, storing, hoisting the goods and materials and returning packing materials to the nominated supplier carriage paid and obtaining credits therefore shall be deemed to be included with the items of fixing only. Where the costs of conveying goods and materials to the site, any special packing or the like are required to be paid by the contractor, particulars shall be given

PROTECTING AND CLEANING THE WORKS

Protection of the works

B22 Protection of the works shall be given as an item covering all sections of the works

Removing rubbish and cleaning

Removing rubbish and debris and cleaning the works internally and externally shall be given as an item.

CONTINGENCIES

Contingencies

Provision for contingencies shall be given as a provision sum as Clause A7 hereof.

SECTION C

DEMOLITIONS AND ALTERATIONS

GENERALLY TO SECTION C

The location of demolitions and alterations shall be given in the description of the items.

C1

(a)

For all buildings, demolition works shall be measured in a form of bills of quantities based on the elements involved. (b) Shoring and scaffolding incidental to demolitions and alternations shall be given in the description of the items. Other shoring (e.g., to old buildings left standing) shall be given in accordance with Clause C10 hereof. Materials arising from demolition and alterations shall become the property of the (c) contractor unless otherwise stated. Clearing away such old materials shall be deemed to be included with the items. Provision shall be made in the bill for credits. Materials required to remain the property of the employer shall be so described. Setting (d) aside and storing such old materials on site shall be given in the description of the items. (e) Materials permitted to be re-used in work measured as new shall be so described. No adjustment shall be made to the measured quantities of new work in which such old materials are re-used. DEMOLITIONS Demolitions C2 Demolishing individual structures (or parts thereof) shall be given as items, except the (a) clearing the site of all structures may be given as an item. The lowest level of the demolition shall be stated (e.g. down to the top of surface concrete at the lowest floor level). (b) Leaving parts of old walls temporarily in position to act as but tresses shall be given in the description of demolition items. **ALTERATIONS** Alterations C3 Alteration work which would be most conveniently priced on the site shall generally be grouped together and given under an appropriate heading. C4 Cutting Cutting openings in old structures shall be given as items stating the openings nominal finished size of the opening, the type and thickness of the old structure and the treatment around the opening (e.g. inserting trimmers, lintels, arches, sills and the like; building up jambs). Extending finishing and making good all work disturbed shall be given in the description. New doors, windows and the like shall be measured in detail in accordance with the appropriate rules **C**5 Blocking up openings in old structures shall be given as items openings stating the size of the Blockings up opening and the nature and thickness of the new work. Taking out thresholds lintels, arches, sills and the like, bonding or otherwise securing the new work to the old structure, extending finishing on the new work and making good all work disturbed shall be given in the description. Pulling down other Pulling down walls, partitions, floors, roofs, staircases and parts of old structures shall be given as **C6** items. Where practicable quantities and dimensions shall be given in the description. parts Taking down fittings Taking down fittings and fixtures (e.g. doors; windows; sanitary appliances; counters; cupboards) **C7** and fixtures shall be given as fixtures items stating the size. Those required to be set aside for refixing shall be so described. Refixing fittings an d Repairing, adapting and refixing old fittings and fixtures shall be given as items stating the size. **C8** fixtures **SUNDRIES** Temporary screens **C**9 Temporary screens and temporary roofs shall each be given separately in square metres or and temporary roofs enumerated as may be appropriate. Weatherproof and dustproof screens shall be so described. Temporary arrangements for dealing with rainwater, temporary doors, temporary windows and the like in screens shall be given in the description. Clearing away temporary work shall be deemed to be included with the items. Shoring C10 Timber shoring (other than that incidental to demolitions and alterations) shall be given in linear metres, stating the nominal size, the position and type of shoring and the nature of the structure to be shored. Erecting, maintaining, clearing away, making good all work disturbed, obtaining licenses, paying fees and providing all necessary nails, wedges and bolts shall be deemed to be included with the items

SECTION D

EXCAVATION AND EARTHWORK

The Unit of Billing shall be the Metre

GENERALLY TO SECTION D

	D1	(a)	Any information available concerning the nature of the ground and strata shall be given. Attention shall be drawn to any open trial holes on site
		(b)	Work in existing buildings shall be done as described. Handling materials and getting them in or out of such buildings shall be deemed to be included with the items
			SITE PREPARATION
Site preparation	D2	(a)	Anti-termite treatment to sub-soil or filling shall be given in square generally metres
		(b)	The removal of termites nests shall be given as an item and the method of destruction of the termites shall be stated. Alternatively, this item may be given in the description of excavations
Preserving vegetable soil	D3		Excavating vegetable soil which is to be preserved shall be given in square metres stating the average depth. Soil deposited on site in permanent spoil heaps or spread on site shall be so described stating the location of such deposits or the average distances from the excavation in linear metres or kilometres.
Removing trees and hedges	D4	(a)	Cutting down trees and grubbing up their roots shall be enumerated. Tree exceeding 600 millimetres girth (measured at a height of 1 metre above ground) shall be grouped together and described as small trees, those over 600 millimetres girth shall be classified and given in further stages of 300 millimetres, giving the type of tree and approximate height.
		(b)	Cutting down hedges and grubbing up their roots shall be given in linear metres stating the nature, type and height (of each hedge or its location
		(c)	Clearing site of bushes, scrub, undergrowth the like and grubbing up their roots shall be given in square metres or hectares. Alternatively, this may be given as an item stating the approximate area. Cutting down trees not exceeding 600 millimetres girth within such areas and grubbing up their roots may be given in the description, but cutting down larger trees shall be dealt with in accordance with paragraph (a) of this clause.
		(d)	Grubbing uproots or stamps shall be enumerated starring girth or stump at top
		(e)	Where trees have already been cut leaving tree stumps which are to be removed from site, grubbing up the tree stumps shall be enumerated stating the girth of the stump at the highest point of the stump.
			EXCAVATION
Excavation generally	D5	(a)	The quantities given for excavating and subsequent disposal shall be deemed to be the bulk before excavating and no allowance shall be made for any sub sequent variations in bulk. No allowance shall be made for any extra space required to accommodate planking and strutting.
		(b)	Getting out excavated materials by any means necessary shall be deemed to be included with the items of excavation. Subsequent disposal of excavated material shall be given in accordance with Clause D15 hereof (except as otherwise provided in Clause D11)
		(c)	Excavating in compacted gravel, decomposed rock and hard murram - where these are defined as all materials such as consolidated murram or gravel, decomposed or stratified rock, stones and boulders less than $0.5 \mathrm{m}^3$, harder than normal or soft material but which can be excavated by ripping or which is in confined spaces and requires excavation by hand using compressor tools - shall be given in cubic metres as extra over all kinds of excavations.
		(d)	Excavating in running silt or running sand (grouped together) shall be given in cubic metres as extra over all kinds of excavation irrespective of depth.
		(e)	Excavating in rock shall be given in cubic metres as extra over all kinds of excavation irrespective of depth. Rock is defined as any material met with in excavation which is of such size or position that it can only be removed by means of wedges, compressed air

plant, other special plant, or explosives.

- (f) Where the depths of excavation are required to be stated in accordance with this rule, they shall be grouped and given in successive stages of 1.50 metres (e.g., not exceeding 1.50 metres deep; over 1.50 metres but not exceeding 3 .00 metres deep).
- All excavations shall be measured net and no allowance shall be made for working space, (g) unless otherwise stated. The quantity of excavation shall be given by the horizontal area of the bottom of the relevant structure(s) multiplied by the average depth from the surface.

Excavating surfaces over 300 millimetres deep to reduce levels shall be given in cubic metres. Such Surface excavation D6 work not exceeding 300 millimetres deep shall be given in square metres stating the average depth.

Cuttings D7 Excavating cuttings shall be given in cubic metres.

D10

D12

D13

D14

D15

Pits

like

Breaking up concrete and brickwork

Breaking up paving

Existing conservancy

Disposal of excavated

tanks, septic tanks

and the like

and the like

materials

Excavating basements and the like shall be given in cubic metres stating the starting level and the **Basements** D8 depth as Clause D5 (f) hereof. Existing voids shall be deducted.

Foundation trenches D9 Excavating trenches to receive foundations shall be given in cubic metres stating the starting level and the depth as Clause D5 (f) hereof. Preliminary trenches for basement retaining walls which are constructed before the basements are excavated shall be so described. No distinction shall be made between surface trenches and basement trenches. For pipe trenches and the like see Clause D11

> Excavating pits to receive bases of stanchions, isolated piers and the like and grouped together shall be given in cubic metres stating the starting level and the depth as Clause D5 (f) hereof. No distinction shall be made between surface pits and basement pits.

Pipe trenches and the D11 Excavating trenches to receive service pipes, cables, kerbs and the like shall be given in linear metres stating the diameter and starting level and the average depth to the nearest 250 millimetres. Filling in, compacting, grading bottoms and disposing of surplus spoil shall be given in the description of such trenches.

> Breaking up concrete, reinforced concrete work and the like met with in excavation shall each be given separately in cubic metres as extra over all kinds of excavation irrespective of depth.

Breaking up surface concrete, reinforced surface concrete, paving tar macadam and the like on the surface of the ground shall each be given separately in square metres stating the thickness and the method of disposal. Alternatively, breaking up such hard materials on the surface may each be given in square metres as extra. over excavation.

Clearing out and removing contents of conservancy tanks, septic tanks and the like shall be enumerated stating the volume and method of disposal.

(a) Multiple-handling of excavated materials and transporting about the site as necessary shall be deemed to be included with the items of final disposal. Multiple-handling which is specifically required shall be given in the description of disposal items.

- (b) Earth fillings shall be measured as equal to the void to be filled. Any thickness stated shall be deemed to be measured after compacting.
- Earth backfilling shall be given in cubic metres except as otherwise provided in Clause D11 (c) hereof.
- (d) Earth filling in making up levels over 300 millimetres thick shall be given in cubic metres. Such work not exceeding 300millimetres thick shall be given in square metres stating the average thickness.
- Earth filling required to be deposited and compacted in layers shall be so described (e) stating the maximum thickness of the layers, and the compaction standard required.
- (f) Surplus spoil shall be given in cubic metres. Spoil deposited on site in permanent spoil heaps or spread on site shall be so described stating the location of such deposits or the average distance from the excavation in linear metres or kilometres. Spoil removed from the site shall be described and the provision of a chute, dump or tip shall be deemed to be included with the items unless otherwise stated.

D16 Treating the surface of the ground or the surface of filling or the bottom of excavation Surface treatments (a) (e.g. .grading to falls, grading to cambers, blinding) shall be given separately in square metres. Alternatively, such treatment may be given in the description of any superficial item of excavation, earth filling, hardcore filling, concrete or paving. Levelling and normal compacting are deemed to be included.

- (b) Compacting which is required to be carried out by specific means shall be appropriately described.
- (c) Any special treatment to bottoms of excavation in rock shall be described
- (d) Trimming sides of cutting and sides of embankments to slope shall each be given separately in square metres stating the angle of slope.
- (e) Trimming sides of excavations in rock to produce fair faces shall be given in square metres.

Soiling seeding planting and turfing

D17 Soiling

Soiling, seeding, planting, fertilizing and turfing to surfaces shall each be given separately in square metres stating the thickness of soil and the quantity per square metre of the seed, plants or fertilizer.

DISPOSAL OF WATER

Disposal of water

- D18
- (a) Keeping excavations free from water (i.e. all water except spring or running water) shall be given as an item. Alternatively, this item may be given in the description of excavation.
- (b) Keeping excavations free from spring or running water shall be given as a provisional or prime cost sum as Clause A7 hereof or as a provisional number of actual pumping hours for the different classes of pumps likely to be required.
- (c) Providing pumps and other equipment, power and attendance for pumping and standing time shall be deemed to be included with the items.

PLANKING AND STRUTTING

Planking and strutting generally

D19

Planking and strutting shall be deemed to mean providing everything requisite to uphold the sides of excavation by whatever means are necessary (other than special shoring or steel sheet piling) and shall be given as an item or shall be included in the description of excavation.

HARDCORE FILLING

Hardcore filling

- D20
- (a) Hardcore filling shall be measured as equal to the void to be filled. Any thickness stated shall be deemed to be measured after compacting.
- (b) Hardcore filling in making up levels over 300 millimetres thick shall be given in cubic metres. Such work not exceeding 300 millimetres thick shall be given in square metres stating the average thickness.
- (c) Hardcore filling required to be deposited and compacted in layers shall be so described stating the maximum thickness of the layers and the compaction standard required.
- (d) Treating the surface of the hardcore shall be given in accordance with Clause D16 (a) and (b) hereof.
- (e) Hand-packing hardcore to form vertical or battering face over 300 millimetres wide shall be given in square metres. Such work not exceeding 300 millimetres wide shall be given in linear metres stating the width
- (f) Forming sinkings in hardcore shall be given in linear metres stating the size

SECTION E

PILING

The Unit of Billing shall be the Metre

GENERAL TO SECTION E

- E1 (a) Any information available concerning the nature of the ground and strata shall be given stating whether the surface is level or irregular. Attention shall be drawn to any available records of bores on the site.
 - (b) Work near rivers or tidal waters shall be so described stating the level of the ground in relation to highwater mark, low-water mark and the Ordnance datum. Attention shall be drawn to any available records of the highest flood-water level in the locality.
 - (c) Providing and assembling the piling equipment on the site and its subsequent removal shall be given as an item. Moving the piling frames about the site, raising and lowering them and providing any necessary staging or barges to support them shall be deemed to be included with the item.
 - (d) A general description of the piling operations shall be given as an item stating the approximate level or levels at which the piling frames will operate (e.g. ground level; reduced level; basement level)
 - (e) Extra excavation (where necessary in order to place the hammer over any pile situated in an angle or similar position), together with any necessary filling and ramming afterwards, shall be given in detail or as provisional items

Wood or concrete	E2	Dociono	WOOD OR CONCRETE PILES for piles shall be deemed to be provided by the employer Piles required to be designed by
piles generally	EZ	_	ractor shall be given in accordance with Clause E7 hereof.
piles generally			actor statuse given in accordance that status I mercon
Wood piles	E3	(a)	Supplying wood piles shall be given in linear metres stating the nominal size. Those over
			10 metres long shall be so described stating the length in further stages of 3 metres.
		(b)	Pointed ends of piles shall be enumerated as extra over the piles on which they occur.
		(5)	Where shoes are fitted they shall be given in the description stating the weight.
t			, , , , , , , , , , , , , , , , , , , ,
		(c)	Handling, transporting and pitching piles shall be enumerated stating the size, the length
			and whether single or in clusters
		(d)	Driving piles (measured from the shoe point in contact with the ground when pitched to
		(α)	the shoe point when driven) shall be given in linear metres stating the set required and
			any limitation on the method of driving. Driving piles on rake and driving piles in water
			shall each be so described.
		(e)	Cutting off the tops of piles to required levels and ringing with steel bands shall be
		(e)	enumerated as extra over the piles concerned stating the size of the cross-section of the
			band. Cutting under water shall be so described stating the depth below the water level.
Cast concrete	E4	(a)	Supplying cast concrete piles shall be given in linear metres piles stating the nominal size
			and the number. Moulds shall be deemed to be included with the items. Piles required to be cast other than on the site and subsequently transported to the site shall be so
			described
			46501.564
		(b)	Bar reinforcement shall be given in accordance with the rules for reinforced concrete in
			Section F hereof.
		(c)	Heads and shoes shall each be enumerated as extra over the piles to which they are fitted
		(0)	stating the weight. Rock-shoes shall be so described.
		(d)	Handling, transporting and pitching the piles shall be enumerated stating the size, the

Cutting off the tops of piles to required levels and preparing the reinforcement shall be

enumerated as extra over the piles concerned. Cutting under water shall be so described

Driving piles shall be given in accordance with Clause E3 (d) hereof

length and whether single or in clusters.

stating the depth below water level.

(e)

(f)

		(g)	Lengthening piles in position shall be given in detail, connections shall be enumerated. Redriving lengthened piles shall be given in linear metres stating the number.
Bored piles	E5	(a)	Boring pile holes and filling bores with concrete (measured as one item) shall be given in linear metres stating the size and number of bores and the mix of concrete filling.
		(b)	Where bored piles are required to finish below the formation level of the ground, an additional item of blind boring shall be given in linear metres stating the size of the bore.
		(c)	Bar reinforcement shall be given in accordance with the rules for reinforced concrete in Section F hereof.
		(d)	Disposal of spoil from the bores shall be given in accordance with the rules for disposal of excavated materials in Section D hereof.
Trial piles	E6	(a)	Trial piles shall be enumerated stating the location, length and nominal size of the pile, the length of driving and the method of testing. Any necessary pointed ends, shoes, heads and reinforcement shall be given in the description.
			CONTRACTOR – DESIGNED CONCRETE PILES
Contractor designed piles	E7	(a)	Contractor-designed concrete piles shall be enumerated stating the actual length, the superimposed load to be carried concrete and the method of disposing of any spoil. Particulars shall be given of any restrictions regarding the type of pile or the method of driving. Any necessary reinforcement in piles shall be deemed to be included.
		(b)	Where the tops of piles are required to finish below the formation level of the ground, the piles shall be so described stating the depth of the top below such level.
			STEEL SHEET PILING
Steel sheet	E8	(a)	Steel sheet piling (measured the area as placed in position piling taken on the centre line of the piling) shall be given in square metres stating the nominal size of such unit and the thickness or substance of the metal. Sheet piling over 10 metres long shall be so described stating the length in further stages of 3 metres. Handling, transporting, pitching, strutting and waling shall be given in the description
		(b)	Driving steel sheet piling (measured from the formation level of the ground to the bottom edge of the sheet when driven) not exceeding 6 metres deep shall be given in square metres stating the depth in further stages of 3 metres. Driving in water shall be so described. Withdrawing steel sheet piling shall be given in the description of driving.
		(c)	Corner piles and junction piles shall each be given in linear metres as extra over the sheet piling in which they occur.
		(d)	Cutting or burning through steel sheet piling shall be given in linear metres as extra over the piling concerned. Cutting under water shall be so described stating the depth below water level.

SECTION F

CONCRETE WORK

The Unit of Billing shall be the Metre except where the Unit is required to be the Kilogramme.

		GENERALLY TO SECTION F
F1	(a)	Particulars of the following shall be given:
		 i. Kind and quality of materials for concrete ii. Any tests of the materials iii. Any tests of the finished work iv. Composition and mix (or strength requirements) of the concrete v. Any addictives e.g. accelerators, retarders, air-entraining agents, waterproofing agents and the like
	(b)	Concrete required to be placed by a particular method (e.g. poured at a stated speed shall be so described.)
	(c)	Concrete required to be consolidated by a particular method (e.g. mechanically tamped; vibrated) shall be so described.
	(d)	Concrete required to be cured by a particular method shall be so described.
	(e)	Curved labours on concrete shall be described irrespective of radius
	(f)	Labours on existing concrete shall be so described
	(g)	Concrete shall be measured as executed but no deduction shall be made for the following:-
		 i. Volume of any steel embedded in the concrete. ii. Voids not exceeding 0.10 Square cubic metres in work given in square metres iii. Voids not exceeding 0.05 cubic metres in work given in cubic metres.
F2	(a)	PLAIN CONCRETE AND REINFORCED CONCRETE Plain in-situ concrete shall be given under an appropriate heading.
	(b)	Reinforced in-situ concrete shall be given under an appropriate heading
	(c)	Foundations to stanchions, columns and piers which are isolated shall be grouped together and given in cubic metres
	(d)	Ground beams and casings to steel ground beams shall each be given separately in cubic metres.
	(e)	Casing to steel grillages shall be given in cubic metres.
	(f)	Grouting under steel stanchions-bases and under steel grillages shall each be given separately in square metres stating the mix of the grout and the number of bases or grillages.
	(g)	Building in and grouting anchor bolts and the like shall be enumerated stating the length of the bolt in stages of 150 millimetres and the mix of the grout.
F4	Machin	ne bases shall be given in cubic metres
	(a)	Beds over 300 millimetres thick shall be given in cubic metres. Those not exceeding 300 millimetres thick shall be given in square metres stating the thickness.
	(b)	Beds laid to slopes not exceeding 15 degrees from horizontal and those laid to slopes over 15 degrees from horizontal shall be so described.
	(c)	Beds laid in bays shall be so described stating the size of bays. Formwork between the bays shall be given in the description.
F6		footpaths and pavings shall each be so described and given in accordance with the rules for Clause F5 hereof.

Machines bases Beds

Roads, foot-paths &

pavings

Floors, roofs and the like	F7	(a)	Suspended floors, roofs and the like (measured over all bearings and grouped together) shall be given in square metres stating the thickness. Those laid around or between steel filler joists (measured over the fillers) shall be so described. Classification shall be as follows:-
			 i. Horizontal ii. Sloping not exceeding 15 degrees from horizontal iii. Sloping over 15 degrees from horizontal iv. Vertical
		(b)	Curved roofs, conical roofs, spherical roofs and elliptical roofs shall each be so described irrespective of radius. Haunchings shall be given in cubic metres.
		(c)	Tops and cheeks of dormers (grouped together) shall be given in square metres stating the thickness. $ \\$
Walls	F8	(a)	Measurements of walls shall be taken between attached piers or pilasters. The thickness of attached piers or pilasters shall be taken as the combined thickness of the wall and the pier or pilaster. Attached or isolated piers, pilasters and the like(except where caused by openings) having a length on plan not exceeding four times the thickness and those caused by openings in walls shall be classified as walls.
		(b)	Walls over 300 millimetres thick shall be given in cubic metres. Those not exceeding 300 millimetres thick shall be given in square metres stating the thickness. Retaining walls shall be so described.
		(c)	Projections on walls (measured beyond the face of the wall) to form cornices, bands and the like (grouped together) shall be given in cubic metres.
		(d)	Concrete fillings to cavities of hollow walls shall be given in square metres stating the thickness. Splaying the top edge shall be deemed to be included in the item.
Casings to steelwork	F9	Floor bea appropria horizonta	o steel beams, lintels, stanchions and the like shall each be given separately in cubic metres. It is and roof beams shall be measured below the slab. Projections shall be added to the stee items. Horizontal members and sloping members not exceeding 15 degrees from all (grouped together) shall be so described. Sloping members over 15 degrees from all (grouped together) shall be so described.
Beams and Columns	F10	roof bear Horizonta together	ntels, columns and the like shall each be given separately in cubic metres. Floor beams and me shall be measured below the slab. Projections shall be added to the appropriate items. It members and sloping members not exceeding 15 degrees from horizontal (grouped shall be so described. Sloping members over 15 degrees from horizontal (grouped shall be so described.
Steps and	F11	(a)	Steps, staircases and strings (grouped together) shall be given staircases in cubic metres.
		(b)	Solid balustrades and landings shall each be given separately in square metres stating the thickness.
Kerbs	F12	Kerbs ma	y be given in cubic metres or in linear metres stating the size
Finishes on to concrete	F13	with the i	measured on the exposed face) which are cast on to cast the concrete by lining formwork required material (e.g. granolithic; cast stone; terrazzo; mosaic) shall be given in square extra over the concrete describing the material and the thickness of the finish.
Labours on concrete	F14	(a)	Treating the surface of unset concrete over 300 millimetres thick (e.g. grading to crossfalls; grading to falls; grading to cambers; grading to slopes, tamping; trowelling) shall be given in square metres. Such treatments to the surface of unset concrete not exceeding 300 millimetres thick shall be given in the description.
		(b)	Forming channels and chases in the surface of unset concrete shall be given in linear metres stating the shape, width and the depth. Channels to falls shall be so described. Channels and chases requiring additional concrete shall be so described stating the size of the additional concrete. Formwork shall be given in the description. Ends angles, intersections and outlets shall be given in the description.
Expansion joints in Concrete	F15	Expansio	n joints in concrete where over 300 millimetres wide shall be given in square metres. n joints of 300 millimetres wide and under shall be given in linear metres stating the width. k shall be given in the description.

REINFORCEMENT

			REINFORCEMENT
Bar rein-forcement	F16	(a)	Particulars of the following shall be given:-
			i. Kind and quality of steel
			ii. Any tests of the bars
			iii. Any restrictions as to hot or cold bending.
		(b)	Bar reinforcement (measured as executed) including links, stirrups, binders, special spacers and the like shall be given in kilogrammes stating the size. Bends, hooks, tying wire, distance blocks and ordinary spacers shall be given in the description. No allowance in calculating the weight of reinforcement shall be made for tying wire, ordinary spacers or rolling margin. Reinforcement shall not be classified as to location in the structure.
		(c)	Bars over 12 metres long shall be so described stating the length in further stages of 2 metres.
		(d)	Bars specially bent to curve shall be so described irrespective of radius.
		(e)	Twisted bars or bars of special section shall be so described.
		(f)	High-tensile steel bars shall be so described
Fabric reinforcement	F17	(a)	Fabric reinforcement shall be measured as to area covered but no allowance shall be made for laps and no deduction shall be made for voids not exceeding 1 square metre. Bends, tying wire and distance blocks shall be given in the description.
		(b)	Fabric reinforcement shall be given in square metres stating the mesh, the weight per 1 square metre and the minimum extent of side and end laps.
		(c)	Strips required to be in one width (e.g. in foundations under walls:- in tension strips to floors and roofs) shall be given in linear metres stating the width, the mesh, the weight per 1 square metre and the minimum extent of end laps.
		(d)	Self-centering fabric reinforcement shall be so described. Temporary strutting shall be given in the description and when over 3.50 metres high shall be so described stating the height in further stages of 1.50 metres.
Labours on fabric rein- forcement	F18	(a)	Raking cutting and curved cutting on fabric reinforcement shall each be given separately in liner metres stating the mesh and the weight of the fabric.
		(b)	Notching fabric reinforcement around obstructions shall be deemed to be included.
			FORMWORK
Formwork Generally	F19	(a)	Formwork shall be measured as the actual surfaces of the finished structure which require to be supported during the desposition of the concrete, including the upper surfaces of the work sloping more than 15 degrees from horizontal. Where the face of the concrete is troughed or similarly shaped, the method of measuring the formwork shall be stated. No allowance shall be made for overlaps and passing at angles and no deduction shall be made for the following:-
			I. Voids not exceeding 1 square metreII. Intersections of main beams with walls or columnsIII. Intersections of secondary beams with main beams
		(b)	Battens, struts, reversed cut strings, bolting, wedging, easing, striking and removing shall be deemed to be included with the formwork.
		(c)	Formwork to curved surfaces, conical surfaces and spherical surfaces shall each be so described stating the radius. Formwork to elliptical surfaces and other surfaces curved to more than one radius shall be so described stating the radii. Curved linear items of formwork shall be so described irrespective of the radii.
		(d)	Coating formwork with a retarding agent shall be measured in square metres.
		(e)	Formwork left in shall be so described
		(f)	Wrought formwork shall be so described or alternatively may be given as extra over formwork for wrought face. Any further treatment after removal of formwork to produce the required finish (e.g. rubbing down with carborundum) shall be included with such item of formwork and fully described.

Formwork required to be lined with particular material (e.g. wall board; hand board; (g) plywood; paper) shall be so described. Lining material which is required to be left in position on the concrete shall be given separately in square metres stating the method of securing. Making good exposed faces of concrete after removal of sawn formwork (e.g. cutting off (h) projecting fins; filling in small voids) shall be given in the description of the formwork. Formwork to surfaces (other than those mentioned in Clauses F21 to F23 hereof) shall be Formwork to surfaces F20 (a) given in square metres. Classification of formwork shall be as follows:-(i) To horizontal soffites of floors, roofs, landings and the like (grouped To sloping soffites of floors, roofs, staircases and the like (grouped together). (ii) (iii) To sloping upper surfaces of floors, roofs, and the like where more than 15 degrees from horizontal (grouped together). To vertical or battering sides of foundations, ground beams, machine bases (iv) and the like (grouped together). To vertical or battering sides of walls, solid balustrades and the like (grouped together). (vi) To vertical or battering sides of stanchion-casings, columns, piers, pilasters and the like (grouped together). (vii) To sides and soffites of openings in walls, recesses in walls, projecting panels on walls and the like (grouped together). To sides and soffites of horizontal beam-casings, beams, lintels, and the like (ix) (grouped together). Weaveal To sides and soffites of sloping beam-casings, staircase-strings and the like х. (grouped together). xi) To sloping upper surfaces of beam-casings, beams, stair case-strings and the like where more than 15 degrees from horizontal (grouped together). (b) Formwork to sofffites requiring strutting over 3.50 metres high shall be so described stating the height in further stages of 1.50 metres. Formwork to sides and soffites of beams occurring below slabs where strutting is measured in accordance with the preceding rule shall be given separately stating the same strutting height as the slab Formwork to soffites of solid concrete floors or solid roofs over 250 millimetres thick shall (c) be so described. Formwork to isolated beam-casings and isolated beams (Le. detached from concrete floors (d) or roof) shall be so described. Where soffites require strutting over 3.50metres high the formwork shall be so described, including formwork to sides, stating the height in further stages of 1.50 metres. Formwork to edges Formwork to edges shall be given in linear metres stating the width in stages of 75 F21 (a) millimetres. Classification shall be as follows:and risers To edges of beds, roads, footpaths, pavings and the like (grouped together). ii. To edges of suspended floors, landings and roofs (grouped together) iii. To sides of kerbs and upstands (groups together) To risers of steps and staircase (grouped together) iv. Formwork to soffites of projecting eaves and hoods (grouped together) shall be given in (b) linear metres, where not exceeding 300 millimetres wide in stages of 75 milimetres and in square metres were exsceeding 300 mm wide Formwork to bands F22 Formwork to projecting or sunk bands, cornices and the like (grouped together) shall be given in and cornices linear metres as extra over the formwork in which they occur giving the size. Formwork to throats, grooves, chases, rebates, chamfers over 50 millimetres wide, Formwork to grooves, F23 (a)

splayed internal angles over 25 millimetres wide, mouldings and the like shall each be

given separately in linear metres stating the size. Plain stops shall be deemed to be included with the form work but stops which are splayed or moulded shall each be enumerated separately. Stops shall be deemed to be included with the formwork.

chases, chambers and

mouldings

		(b)	Forming chamfers not exceeding 50 millimetres wide and forming splayed internal angles not exceeding 25 millimetres wide shall be given in the description of the formwork.
Labours on formwork	F24	(a)	Raking cutting and curved cutting shall each be given separately in linear metres.
		(b)	Splayed edges and notches shall be deemed to be included with the formwork items.
		(c)	Cutting and fitting formwork around projecting members which will be cast in (e.g. pipes; continuity bars) shall be enumerated singly or in groups
			PRECAST CONCRETE UNITS
Precast units generally	F25	(a)	Precast units shall be given under an appropriate heading
		(b)	Particulars of the following shall be given:-
			i. Kind, quality and size of reinforcement
			ii. Shape of cross-section of unit.
			iii. Nature and extent of surface finish
			iv. Composition and mix of jointing and bedding materials
			v. Method of fixing
		(c)	Formwork or moulds for precast units shall be deemed to be included with the items.
		(d)	Precast units over 2 metres long shall be so described stating the numbers
Structural units	F26		ral units (e.g. stanchions; beams; purlins; trusses) shall each be enumerated separately the size.
Steps and staircases	F27	extreme	andings, solid balustrade panels and the like shall each be enumerated separately stating the e size. Members of irregular shape shall be so described. Nosings, rebates, fair ends, returned laped ends, wall-holds and the like shall be given in the description.
Kerbs and edgings	F28	membe	dgings and the like shall each be given separately in linear metres stating the size. Curved rs shall be so described stating the mean radius. Fair ends, rounded ends, angles, tions and the like shall each be enumerated separately when specially cast.
Shelves seats, duct covers, sills lintels and copings	F29	and give the mea like shal	divisions, seats, duct covers, sills, lintels, copings and the like shall each be fully described en separately in linear, metres stating the size. Curved members shall be so described stating in radius. Notches, rounded corners, fair ends, stooled ends, returned ends, angles and the libe enumerated separately. Members of irregular shape shall each be enumarated ely stating the extreme size.
Templates	F30		es (or padstones), bases to posts and the like shall each be and bases ated separately stating the size.
Pier-caps and chimney-caps	F31	-	s, chimney-caps and the like shall each be enumerated separately stating the size and the there other than rectangular. Openings in chimney-caps shall be given in the description.
Hollow block construction generally	F32		HOLLOW BLOCK SUSPENDED CONSTRUCTION Hollow block suspended construction and formwork in contact therewith only shall be given under the appropriate heading.
Floors, roofs and the like	F33	(a)	Suspended floors, roofs and the like (measured over the ribs and bearings and grouped together) shall be given in square metres in accordance with Clause F7 hereof. Filling ends of hollow-blocks shall be deemed to be included with the item. Solid concrete work in hollow-block construction shall be deemed to be included with the item, alternatively, solid concrete work in hollow-block construction may be measured separately and so described. Particulars of the following shall be given:-
			i. Composition And mix of concrete for ribs and topping
			ii. Overall thickness of slab
			iii. Size and type of blocks
			iv. Distance between centres of rows of blocks

			v. Size and type of lip tiles to soffites of concrete ribs between blocks
			vi. Finish to exposed soffites of blocks and slip tiles (e.g. plain; keyed)
		(b)	Tops and cheeks of dormers (grouped together) shall be given in square metres stating the thickness.
Labours on hollow- block construction	F34	Forming I	nips and valleys shall each be given separately in linear metres stating the thickness.
Fixing slips and metal clips	F35	Fixing-slip of fixing.	os, metal clips and the like shall each be enumerated separately stating the method
Formwork	F36	Formwor	k shall be given in accordance with clauses F19 to 24 hereof
Prestressed concrete generally	F37	(a)	PRESTRESSED CONCRETE Prestressed concrete work (Le. work where reinforcement is tensioned before or as the load is applied) and its reinforcement and associated formwork shall be given under an appropriate heading.
		(b)	A general description of the prestressed work and of the system and method of tensioning shall be given. Where special and complicated construction is involved drawings shall be provided.
		(c)	Particulars of the following shall be given:- i. Steel wires and any preparatory treatment
			ii. Type of jack to be used for tensioning
			iii. Types of cones, wedges, anchor-plates, spacers, distance-pieces, and the like.
			iv. Amount of tension to be applied to wires
			v. Number and diameter of wires to be simultaneously tensioned.
			vi. Whether wires to be pre-tensioned or post-tensioned or tensioned as the load is applied and whether from one or both ends.
			vii. Maturity of concrete before pre-tensioning is released or post-tensioning is applied
			viii. Tests to be applied
			ix. Cutting off, sealing and treating the ends of wires and cables
Structural in-situ members	F38	(a)	Structural in-situ members (e.g. beams; columns) shall be given in accordance with Clause F10 hereof.
		(b)	Members cast in section (i.e. not in one continuous operation) shall be so described stating the number and average length of the sections.
		(c)	Construction joints between sections shall be enumerated.
Cores, ducts and recesses	F39	(a)	Forming and grouting or sealing the ducts or grooves shall be given in linear metres stating the number and the size. Particulars of the following shall be given:-
			i. Sleeves or sheathing
			ii. Temporary supports required in the formation of the ducts
			iii. Composition of the grout
		(b)	Ducts or grooves over 6 metres long shall be so described stating the length in further stages of 3 metres.
		(c)	Curved sleeves and curved sheathing shall each be so described irrespective of radius.
		(d)	Forming and grouting the air-holes at ends or sides of ducts shall be enumerated.
		(e)	Fillings in the jacking or anchoring recesses shall be enumerated stating the finish to

exposed surface of filling.

			exposed surface of filling.
Wires and cables	F40	(a)	Supplying steel wires or cables (measured between anchorages) shall be given in kilogrammes stating the ultimate strength and the size of the wire or cable. Each size shall be given separately. No allowance shall be made for extra lengths, in anchorages or elsewhere.
		(b)	Fixing each length of wire or cable shall be enumerated stating the length, the number of strands in each cable, the type of central core and the type of sheathing (if any) to the wires. Degreasing, straightening, cutting to lengths and assembling wires and cables shall be deemed to be included with the items.
		(c)	Cones, wedges, anchor-plates, spacers, distance-pieces and the like expendable items shall each be enumerated separately.
		(d)	Tensioning each length of wire or cable shall be enumerated stating the sequence. Cutting off ends of wires and cables shall be deemed to be included with the items.
Reinforcement	F41	Reinforce	ement shall be in accordance with Clauses F16 to F18 hereof.
Formwork	F42	(a)	Formwork shall be given in accordance with Clauses F19 to F24 hereof, subject to the following:-
			i. Any special requirements as to strutting and supports shall be stated.
			 Formwork to pre-tensioned and post-tensioned work shall each be so described.
			iii. Temporary restraints for tensioning and the like shall be given in the description of formwork.
		(b)	Formwork to recesses for anchorages shall be enumerated stating the size and shape.
		(c)	Formwork to temporary construction joints shall be enumerated stating the sections of the abutting units.
Precast prestressed units generally	F43	(a)	PRECAST PRESTRESSED UNITS A general description of the precast prestressed units and of the system and method of tensioning shall be given.
		(b)	Particulars of the following shall be given:-
			 Steel wires and other requirements as appropriate in accordance with Clause F37 (c) hereof.
			ii. Shape of cross-section of unit
			iii. Nature and extent of surface finish
			iv. Composition and mix of jointing and bedding material.
		(c)	Formwork or moulds for precast units and for forming anchorage pockets shall be deemed to be included with the items.
Precast units	F44	(a)	Precast units shall be enumerated stating the number, the size, the length, the height above ground, and the method of fixing and bedding. Units of identical section but of varying lengths not exceeding 3 metres may be grouped together and the lengths averaged. Those over 3 metres long may be similarly grouped in further stages of 1.50 metres and the lengths averaged in each case. Those of unusual shape or cross-section shall be so described and sketches provided. Classification shall be as follows:
			i. Pre-tensioned in the mould
			ii. Post –tensioned on the ground after casting
			iii. Cast in section, assembled and post-tensioned before erection.
			iv. Cast in sections for assembly in-situ and post-tensioned after erection.

Post-tensioned after hoisting but capable of self-support

- vi. Post -tensioned after hoisting but requiring support until tensioning is completed.
- (b) Construction joints between adjacent units shall be enumerated.
- (c) Temporary supports required for post-tensioned units classified under (iv) and (vi) of paragraph (a) hereof shall be enumerated stating the size and span of the unit and the height of the support.

Cores, wires and reiforcement

F45

Cores, ducts and recesses shall be given in accordance with Clause F39 hereof. Wires and cables shall be given in accordance with Clause F40 hereof. Reinforcement shall be given in accordance with Clauses F17 to F19 hereof.

SUNDRIES

Grinding	and	sand-
blasting		

F46

Grinding, sand-blasting, bush hammering, brushing to expose aggregate and like treatment to the face of concrete shall each be given separately, in square metres. Such work to offices shall be so described.

Cutting grooves chases, chamfers and the like

F47

Cutting grooves, chases, rebates, chamfers and the like shall each be given separately in linear metres stating the size. For such details produced by formwork see Clause F23 hereof.

Holes F48

- (a) Holes for pipes, tubes, bars, cables, conduits and the like members (grouped together) shall be enumerated stating the size of the member as Clause A4 hereof and the thickness of the concrete. Fixing pipe-sleeves shall be given in the description.
- (b) Small holes for ducting, trunking etc., (grouped together) shall be enumerated stating the size of the member and the thickness of the concrete.

Mortices

F49

F50

Mortices, sinkings and the like shall each be enumerated separately stating the purpose. Running mortices with lead or mortar shall be given in the description.

Making good

Making good concrete in connection with holes and mortices shall be given in the description of such labours

SECTION G

WALLING

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Walling generally	G1	_	shall consist of blocks or bricks laid in mortar (e.g. solid and hollow concrete blockwork; stone block walling; brick work).
	G2	Particula	ars of the following shall be given:-
			 Material, kind, type, finish and size of blocks or bricks Purpose-made blocks or bricks shall be so described.
			ii. Any requirements as to the stone and the quarry
			iii. Type of bond for brickwork
			iv. Composition and mix or mortar for bedding and jointing
Measurement of Walling	G3	(a)	Walling shall be measured the mean length by the average height. No deductions shall be made for the following:-
			i. Voids not exceeding 0.10 square metres
			ii. Chasses
			iii. Flues, lined flues and flue-blocks, where the voids and the work displaced do not together exceed 0.25 square metres in sectional area.
		(b)	All fair raking, fair splayed and fair curved cutting shall be given separately in linear metres and described. All other labours (except cutting chases as Clause G13 hereof) shall be deemed to be included.
		(c)	Labours on different kinds of work shall be given separately. Labours on existing work shall be so described.
		(d)	Curved work shall be so described, stating the mean radius. Rough cutting within the thickness (or the provision of curved blocks or bricks) shall be given in the description of curved work.
		(e)	Measurements of walls shall be taken through attached piers. Attached piers shall be given in linear metres as extra over the walling in which they occur stating the width of the pier and the projection from the face of the wall. Attached or isolated piers (except where caused by openings) having a length on plan not exceeding four times the thickness shall be classified as piers and those having a length over four times the thickness and those caused by openings shall be classified as walls.
Classifications	G4	(a)	Walling shall be given in square metres stating the thickness. Classification shall be as follows:-
			i. Walls
			ii. Filling existing openings
			iii. Skins of hollow walls
			 Backings or facings stating the thickness. Any necessary cutting and bonding and wall ties shall be fully described.
			v. Battering walls (i.e. walls of uniform thickness built battering).
			vi. Tapered walls of diminishing thickness from base to top stating the average thickness whether one or both faces are battered and the rate of batter
			vii. Walling used as formwork. Temporary strutting shall be given in the description.
		(b)	i. Providing special blocks with solid ends shall be given in linear metres as extra over the work in which they occur.

Cube walling	G5	 Filling ends of hollow blocks shall be deemed to be included. Walling in each of the following classes shall be given separately in cubic metres
		 Chimney breasts (measured through the full thickness of the walls to which they are attached).
		ii. Chimney stacks
		iii. Stepped footings
		iv. Isolated piers and columns. Alternatively these may be given in linear metres stating the size. Walls having a length on plan not exceeding four times their thickness (except where caused by openings) shall be classified as isolated piers.
Projections	G6	Walling in projections, bands, oversailing courses and the like (measured beyond the face of the wall) shall be given separately in linear metres stating the size.
Thicknessing	G7	Walling of any thickness in each of the following classes shall be given separately in square metres stating the thickness. Cutting and bonding new to existing and extra material for bonding shall be given in the description stating any special method of bonding. Classification shall be as follows:-
		i. Thickening existing walls (measured beyond the face of the existing wall).
		 Projections on existing walls (measured beyond the face of the existing wall) of attached piers, chimney breasts and the like.
Grooved blocks	G8	Grooved blocks and bricks shall be given in square metres as extra over the walling in which they occur.
Flue lining	G9	Refractory brick linings to flues shall be given in square metres stating the thickness. Those bonded to surrounding walling shall be so described.
Glass blocks	G10	(a) Glass blockwork in walls and panels shall be given in square metres stating the size and thickness of the blocks.
		(b) Bedding the perimeter of glass blockwork in material different from the mortar shall be given in linear metres stating the width and the kind of bedding material.
Cavity walls	G11	(a) Forming cavities in hollow walls shall be given in square metres stating the width of the cavity. Wall ties shall be given in the description stating the type and the disposition or number.
		(b) Closing cavities at ends of hollow walls or at jambs of openings shall be given in linear metres stating the width of the cavity and the method of closing.
Eaves	G12	Walling in eaves-filling shall be given in linear metres as a labour filling and material item stating the thickness and maximum height of the filling and including the description of the cutting.
Chases	G13	Horizontal rough chases in new work for edges of floors, landings and roofs shall be deemed to be included with the walling. Other horizontal rough chases and all raking, vertical and curved rough chases shall each be given separately in linear metres stating the size.
Rough arches	G14	Rough arches (measured the mean length on face) shall be given in linear metres as extra over the walling in which they occur stating the thickness and the number of rings in the arches.
Bonding ends	G15	Bonding ends of new walling to other types of construction or to existing work shall be given in linear metres, stating the thickness of the walling. Forming pockets in new construction, cutting pockets in existing construction and material for bonding shall be given in the description.
Reinforced walls	G16	Particulars of reinforcement in walls shall be given in the description of the item concerned
Seating and flues	G17	WALLING IN CONNECTION WITH BOILERS (a) Boiler seatings and boiler flues shall be given in detail in accordance with the relevant Clauses hereof under an appropriate heading. Firebricks and fireclay work shall each be so described.
		(b) Boiler-seating blocks and curved flue-covers shall each be given separately in linear metres stating the size. Pieces of irregular shape shall be enumerated stating the size.
Chimneys	G18	Chimney-shafts shall be given in detail in accordance with the relevant Clauses hereof under an appropriate heading stating the number, the size on plan, the shape and the overall height. Chimney-

shafts of different shapes and heights shall be given separately. Those required to be built from outside scaffolding shall be so described.

FACEWORK

- ' "	0.10		FACEWORK
Facework generally	G19	(a)	The rules relating to facework shall apply equally to fair face.
		(b)	Particulars of the following shall be given:-
			i. Method and description of dressing or facing
			 Kind and quality of facing blocks or bricks where different from those in the body of the work. Purpose made blocks or bricks shall be so described.
			iii. Size of facing blocks or bricks where different from those in the body of the work, and the method of bonding such facings to the backing.
			 iv. Composition and mix of mortar for pointing where different from that in the body of the work.
			v. Method and description of pointing
			vi. Type of bond for brickwork except in the case of fair face
		(c)	Facework shall be measured on exposed faces and shall be given in square metres as extra over the walling in which it occurs. Curved facework shall be so described. Pointing shall be given in the description. Reveals, returns, soffites, offsets, exposed edges around superficial items of sunk or projecting work and the like shall be measured in square metres and added to the general facework.
		(d)	Deductions of facework shall be made for string courses, cills, lintels, plates and the like.
		(e)	Facework built overhand shall be so described
		(f)	Battered face work shall be so described stating the rate of batter.
		(g)	Facework sunk or projecting shall be so described stating the depth or projection.
		(h)	Facework to vaulting shall be so described
Angles and chases	G20	(a)	Fair vertical internal angles and fair vertical external angles shall be deemed to be included with the facework.
		(b)	Fair chases of any description shall be given in linear metres stating the size.
Tile creasings	G21	(a)	Flush, sunk and projecting tile creasings shall each be given separately in linear metres as extra over the walling in which they occur stating the number of courses and the depth or projection. Horizontal, raking vertical and curved members shall each be so described.
		(b)	Fair ends and angles of any description are deemed to be included.
Quoins	G22	(a)	Facework of flush quoins formed with facing blocks or bricks which differ in kind or size from the general facings shall be given in linear metres (measured on the vertical angle) stating the average girth and the method of jointing between quoin and general facework.
		(b)	Facework to sunk and projecting quoins shall each be given separately in linear metres (measured on the vertical angle) stating the average girth, the depth or projection and the method of jointing between quoin and general facework
		(c)	Cut and rubbed quoins shall be described.
		(d)	Tile insets in quoins and rustications in quoins shall be given in the description
Arches	G23	width or	c to arches (measured the mean length on face) shall be given in linear metres stating the face, the width of the exposed soffite and the outline of the arch. All fair cutting shall be to be included.
Tumblings of buttresses	G24	Facework	c to tumblings of buttresses shall be enumerated stating the size
Walling faced or fair on both sides	G25	(a)	Stone walling faced both sides built with blocks extending the full thickness of the wall shall be given separately in square metres.

		(b) Half-brick walls and one-brick walls built fair both sides or entirely of facings shall each be given separately in square metres.
		(c) Fair returns (e.g. ends of walls, reveals of openings) shall be given in square metres and so described.
•		BRICK FACEWORK
Angles	G26	Purpose-made bricks to form bull-nosed, squint, birdsmouth or moulded angles and the like shall be given separately and so described.
Band courses	G27	(a) Facework to all sunk and projecting plain bands not exceeding 300 millimetres and flush plain bands formed with facing bricks which differ in kind or size from the general facings shall be given in linear metres stating the width of the band and the depth or projection. Horizontal, raking, vertical and curved bands shall each be so described.
		(b) Ends, angles etc., shall be deemed to be included with the items
Bricks on edge or moulded	G28	(a) Facework, to flush, sunk and projecting brick-on-edge bands, dentilled bands, basket-pattern bands, moulded or splayed courses plinth cappings, moulded string courses, moulded cornices and the like shall each be given separately in linear. Metres stating the width of the band and the depth or projection. Horizontal, raking, vertical and curved members shall each be so described. Moulded or splayed bands which consist entirely of headers or stretches shall be so described.
		(b) Ends, internal angles, external angles and irregular angles, shall each be enumerated separately.
Cills, thresholds, copings	G29	(a) Cills, thresholds, copings and steps built of fair-faced brickwork or entirely of facings shall each be given separately in linear metres stating the size and the method of forming (e.g. all headers on edge; all stretches-on-end). Horizontal, raking, vertical and curved work and work set weathering shall each be so described.
		(b) Ends, internal angles, external angles and irregular angles shall be deemed to be included with the items.
Key blocks, corbels etc	G30	Key blocks, corbels, bases to pilasters, and cappings to isolated piers shall be enumerated separately stating the size. Fair Cutting shall be deemed to be included with the items.
		RUBBLE WALLING
Rubble walling generally	G31	Rubble work shall consist of natural stones either irregular in shape or roughly dressed and laid dry or in mortar with comparatively thick joints.
	G32	Dry rubble work (i.e. work built without mortar) shall be so described.
	G33	Particulars of the following shall be given:-
		 Type of walling stating whether of random or squared stones and, where coursed, the average height of the courses or the maximum and minimum heights of diminishing courses.
		ii. Texture and finish to exposed faces of stones (e.g. natural; rough-dressed; hammer-dressed).
Levelled courses	G34	Levelling uncoursed rubble work for damp-proof courses, band-sills, places, copings and the like (grouped together) shall be given in linear metres stating the width.
Dressed margins	G35	Dressed margins on rubble work shall be given in linear metres stating the width of the margin. Stops and angles shall be deemed to be included with the items.
Copings	G36	Copings formed of rough stones shall be given in linear metres stating the width and average height of the coping. Ends and angles shall be deemed to be included with the items.
Masonry generally	G37	MASONRY (a) Masonry shall consist of dressed blocks of natural stone accurately worked to given dimensions and laid in mortar in courses with fine joints.
		(B) Particulars shall be given of texture and finish to exposed faces of stones (e.g. sawn; rubbed; tooled; vermiculated; reticulated; polished) and any requirements as to coating the surface of the finished work and cleaning on completion.

		(c)	Labours necessary to produce sawn stones of the required overall size shall be deemed to be included with the items.
		(d)	Stones shall be deemed to be set on their natural beds unless otherwise described.
		(e)	Stone dressings, to walls other than masonry-faced walls, shall be so described.
		(f)	Templates and patterns shall be deemed to be included with the item
		(g)	Joggle joints, sunk joints, rebated joints, concealed rebated joints and the like shall be given in the description of the work on which they occur. The extra stone required for joints shall be deemed to be included with the items.
Measurement	G38	(a)	Superficial items of work shall be measured the mean length by the average height as executed. The measurements shall be taken over all mortar joints.
		(b)	Linear items of work shall be measured the mean length as executed. The measurements shall be taken over all mortar joints.
		(c)	Enumerated items of work shall be measured as the smallest block from which each item could be obtained having regard in the case of natural stone to the plane in which the stone is required to be laid with relation to its quarry bed. The measurements shall be taken over one mortar bed and one mortar joint.
		(d)	Plain work, sunk work, circular work and circular-circular work shall each be so described. Arises shall be deemed to be included with the items on which they occur. For moulded work see Clause G46 hereof. Work curved on plan shall be so described stating the mean radius and the extra stone required for curved work shall be deemed to be included with the items. Curved labour shall be so described irrespective of the radius.
		(e)	Stones or blocks over 1.50 metres long shall be so described stating the length in stages of 0.50 metres.
		(f)	Stones or blocks over 0.50 cubic metre shall be so described stating the cube in further stages of 0.25 cubic metres.
		(g)	Labours on different kinds of stone shall each be given separately.
		(h)	Pointing shall be given in the description of the work on which it occurs.
Ends and angles of walls	G39	(a)	Square ends, square reveals and square external angles of walls shall be given in linear metres stating the thickness of the wall.
		(b)	Splayed ends, battered ends, battered external angles and battered internal angles of walls shall each be: given separately in linear metres stating the thickness of the wall.
		(c)	The extra stone required for splayed or battered ends or angles of walls shall be deemed to be included with the items.
		(d)	Squint angles to walls and any ends or angles to walls which involve the use of stones thicker than the wall in which they occur shall be dealt with in accordance with Clause G. 51 hereof.
Stone facework	G40	(a)	Stone facework bonded to a backing of other material shall be given in square metres stating the average thickness of the facework.
		(b)	Stone facework built against a backing of other material shall be given in square metres stating the thickness of the facework. Wall-ties or anchors shall be given in the description stating the type and spacing thereof and the method of securing to the backing.
		(c)	Stone facework used as formwork to concrete shall be so described. Temporary strutting shall be given in the description.
Stone slabbing or cladding to walls	G41	For pavin	gs and stone slabbing or cladding to walls see Section S.
Rough cutting	G42	(a)	Rough notchings and rough sinkings (grouped together) for steel sections, concrete columns, concrete beams and the like shall be given in linear metres stating the girth of the cutting in stages of 150 millimetres.
		(b)	Rough notchings and rough sinkings (grouped together) for gusset -plates, ends of joists

			and the like shall be enumerated stating the size of the cutting.
Fair cutting	G43	(a)	Fair raking cutting on superficial items of stonework shall be given in linear metres stating the thickness. The extra stone required for raking cutting shall be deemed to be included with the items.
		(b)	Fair curved cutting on superficial items of stonework shall be given in linear metres stating the thickness. The extra stone required for curved cutting shall be deemed to be included with the items.
Rustications	G44	Rusticatio	ons shall be given in the description of the stonework on which they occur
Grooves, rebates, margins, flutes, sinkings and angles	G45	(a)	Grooves, throats, rebates, margins, flutes, sinkings, chamfered angles, rounded angles and the like labours on superficial items of stonework shall each be given separately in linear metres stating the width or girth. Stops and mitres shall each be enumerated separately.
		(b)	Such labours on linear items of stonework shall be given in the description stating the width or girth. Stops and mitres shall each be enumerated separately.
		(c)	Such labours on enumerated items of stonework shall be given in the description stating the width or girth and the number of stops and mitres.
Mouldings	G46	(a)	Mouldings on superficial items of stonework shall be given in linear metres stating the girth. Undercut mouldings shall be so described. Stops, mitres returned ends and the like shall each be enumerated separately.
		(b)	Mouldings on linear items of stonework shall be given in the description stating the girth. Stops, mitres, returned ends and the like shall each be enumerated separately.
		(c)	Mouldings on enumerated items of stonework shall be given in the description stating the girth and the number of stops, mitres, returned ends and the like.
		(d)	The extra stone required for projecting mouldings shall be added to the thickness of the stonework on which they occur
Enrichments	G47	stating the	ents (e.g. bead-and-reel; egg-and-dart; dentils) shall each be given separately in linear metres are size. The extra stone required for projecting enrichments shall be added to the thickness of ework on which they occur. Mouldings on or between dentils shall be given in the description are girth. Stops, mitres, returned ends and the like to enrichments shall each be enumerated
Ornaments	G48		its (e.g. scrolls, rosettes; crockets) shall each be enumerated separately stating the size. The ne required for projecting ornaments shall be added to the thickness of the stonework on ey occur.
Small panels	G49	(a)	Stones forming small panels (i.e. panels not exceeding 0.10 square metres) shall each be enumerated separately stating the size. Those which are flush shall be so described. Those which are sunk or projecting shall each be so described stating set-back or projection.
		(b)	Small panels worked on other stones shall be enumerated stating the size and the set-back or projection. The extra stone required for projecting panels shall be added to the thickness of the stone work on which they occur.
Pilasters	G50	(a)	Stones forming pilasters shall be given in linear metres (measured vertically) stating the width on face, the total thickness and the projection beyond the face of the wall. Battered pilasters and those sunk to entasis shall each be so described.
		(b)	Caps and bases to pilasters shall each be enumerated separately stating the size
Quoins and jambs	G51	stating th	rming quoins and jambs shall each be given separately in linear metres (measured vertically) ie width on face and the thickness. Those which are battered or projecting (or both) shall o described.
Columns	G52	(a)	Independent columns shall be given in linear metres (measured vertically) stating the size of the cross-section or the diameter. Those sunk to entasis shall be so described stating the greatest size or diameter.
		(b)	Stones forming attached columns shall be given in linear metres (measured vertically) stating the width of face, the total thickness and the diameter of the projection. Those sunk to entasis shall be so described stating the greatest diameter

		(c)	Caps and bases to columns or attached columns shall each be enumerated separately stating the size.
Lintels, sills, transoms	G53	(a)	Lintels, sills, mullions, and transoms shall each be given separately in mullions & linear metres stating the size.
		(b)	Ends and stoolings shall each be enumerated separately as extra over the member on which they occur.
Copings, cornices and band courses	G54	(a)	Copings, cornices, band-courses, string-courses, plinth cappings and the like members shall each be given separately in linear metres stating the size. Horizontal, raking and vertical members shall each be so described. Fair ends, returned ends and the like shall each be enumerated separately as extra over the member on which they occur
		(b)	Kneeler-blocks, bonder-blocks, apex-blocks, angle-blocks, stooling-blocks and any end-blocks which involve the use of stone thicker than the member in which they occur shall each be enumerated separately stating the size.
		(c)	Plain band-courses over 300 millimetres wide shall be dealt with as walling or facework.
Slab architraves and surrounds to openings	G55	(a)	Slab architraves and slab surrounds to openings (i.e. slabs not bonded to surrounding work) shall each be given separately in linear metres stating the size. Ends and angles shall be deemed to be included with the items.
		(b)	Plinth-blocks, angle-blocks, key-blocks and the like shall each be enumerated separately stating the size.
Arches	G56		s, voussoirs and keystones of arches shall be enumerated separately stating the size of the d the type of arch. Projecting members of arches shall be so described stating the projection.
Pier –caps and chimney-caps	G57	-	s, chimney-caps and the like shall each be enumerated separately stating the size. Openings ney-caps shall be given in the description
Finials, brackets and corbels	G58	Finials, te	erminals, brackets, corbels and the like shall each be enumerated separately stating the size
Tracery	G59	Stones f	orming tracery shall be enumerated stating the size
Special features	G60	openings design of	eatures composed of one or more stones (e.g. ornamental panels; oriel windows; bullseye s; niches; small domes; fleches) shall each be enumerated separately stating the nature and the feature, the number of stones, the total cubic feet of stones required and the ons of the exposed faces.
Steps, winders and landings	G61	(a)	Steps (except winders) shall be given in linear metres stating the size and the number of steps,. Spandril steps (i.e. steps with sloping soffits) shall be so described. Fair ends, returned ends, rounded ends, stooled ends, wall-holds and the like shall each be enumerated separately as extra over the member on which they occur.
		(b)	Winders and landings shall each be enumerated separately stating the size and the number of stones. Landings of irregular shape shall be so described. Fair ends, stooled ends, wall-holds, fair edges, nosings, rebate, grooves and the like shall be given in the description.
Handrails, cappings and kerbs	G62	(a)	Handrails, cappings and kerbs shall each be given separately in linear metres stating the size. Fully-moulded handrails shall be so described. Stopped ends, returned ends, mitres, stoolings, wall-holds and the like shall each be enumerated separately as extra over the member on which they occur.
		(b)	Scrolled ends, angle-blocks, ramp-blocks, wreath-blocks and the like shall each be enumerated separately stating the size.
Balustrade panelS	G63	those wo	de panels and the like shall be enumerated stating the size. Those of irregular shape and orked both sides shall be so described. Fair edges, shaped edges, perforations, sinkings and shall be given in the description.
Balusters and newels	G64	Baluster size.	s, half-balusters, newels and newel-caps shall each be enumerated separately stating the
Cover-stones and corbel-courses	G65		ones, corbel-courses and the like shall be given separately in linear metres stating the size. es shall be given in the description. Fair ends shall be enumerated as extra over the member

on which they occur.

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Templates, bases and hearths	G66	-	s. bases. thresholds, hearths and the like shall each be enumerated separately stating the edges shall be given in the description stating the number
Shelves, divisions, table-tops, seats and bath-panels	G67	(a)	Shelves, divisions, table-tops, work-tops, counter-tops, seats, bath-panels and the like over 300 millimetres wide shall each be given separately in square metres stating the thickness. Those not exceeding 300 millimetres wide shall be given in linear metres and stating the thickness and the width. Members of irregular shape and curved members shall each be enumerated separately stating the thickness and the extreme size.
		(b)	Fair edges, rounded edges, moulded edges, jointed edges, grooves, rebates and the like shall each be given separately in linear metres. Stops to grooves and rebates, also internal angles and external angles to rounded edges and moulded edges shall each be enumerated separately.
		(c)	Notches, rounded corners, holes and he like shall each be enumerated separately stating the girth or size.
Carvings and sculpture	G68	(a)	Carving and sculpture shall each be enumerated separately stating the character of the work. Detailed drawings shall be provided but where such drawings are not available or where a special carver or sculptor is required the work shall be given as a provisional or prime cost sum. Providing models shall be given in the description.
		(b)	Selecting blocks of stone for size and quality shall be given as an item. Boasting for carving shall be given in the description of the stone to be used for carving or sculpture.
		(c)	Temporary work (e.g. special accommodation special scaffolding; screens; shelters) required for the exclusive use of carvers or sculptors shall be given as an item stating the nature of the temporary work. Removing temporary work and making good after shall be deemed to be included with the item.
		(d)	Attending upon and cleaning down after the carvers and sculptors shall be given as an item.
		(e)	Working mouldings and similar members to carving and sculpture shall be enumerated stating the size of the moulding or member.
Cast stonework	G69	(a)	CAST STONE WORK Cast stonework shall consist of blocks of reconstructed or artificial stone accurately cast to given dimensions and used in a generally similar manner and for the same purpose as natural stone.
		(b)	Particulars of the following shall be given: i. Any requirements as to the reinforcement of blocks ii. Any requirements as to the thickness, mix and colour of the facing material. iii. Texture and finish of exposed faces of blocks (e.g. rough; smooth; rubbed; vermiculated; reticulated; polished). iv. Any requirements as to coating the surface of the finished work and cleaning on completion.
		(c)	Moulds necessary to produce blocks of the required size and shape shall be deemed to be included with the items.
Work in cast stone	G70	Work in hereof.	cast stone shall be given in accordance with the rules for masonry in Clauses G37 to G68
			CLAYWARE WORK
Clayware Generally	G71	(a)	Clayware work shall consist of blocks of fired C1ayware cast to given dimensions and used in a similar manner and for the same purpose as natural stone.
		(b)	Particulars of the following shall be given:-
			i. Kind of clayware (e.g. natural clayware; stoneware; terra cotta; faience).
			ii. Any requirements to the colouriii. Texture and finish of exposed faces of blocks (e.g. rough; smooth; glazed; double glazed).
			iv. Any requirements as to cleaning the finished work on completion
		(c)	Moulds necessary to produce blocks of the required size and shape shall be deemed to be included with the items.

		(d)	Blocks required to be cast hollow and filled with concrete shall be so described stating the composition and mix of the concrete. Formwork shall be deemed to be included with the items.
Work in clayware	G72	Work in hereof.	n clayware shall be given in accordance with the rules for masonry in Clauses G37 to G68
			SUNDRIES
Preparing for raising	G73	(a)	Preparing tops of old walls to receive new shall be given in linear metres stating the thickness of the old wall.
		(b)	Beds of mortar to cover rivets of girders under walls shall be deemed to be included with the walls which shall be measured from the top surface of the girders.
Weather fillets and angle-fillets	G74	Curved f	r-fillets and angle-fillets shall each be given separately in linear metres stating the width. fillets shall be described irrespective of radius. Ends and angles to fillets shall be deemed to be I with the items.
Bedding	G75		plates, corrugated sheeting, wood frames and sills and the like and pointing to one or both all be deemed to be included with the items.
Wedging and pinner up	G76	transmit	g and pinning up new work to underside of old construction in cases where the load is to be tted to the new work shall be given in linear metres stating the thickness of the work. The ls for wedging and pinning shall be described.
Cutting grooves	G77	Cutting §	grooves for water-bars and the like shall be given in linear metres
Preparing for flashings and asphalt skirtings	G78	(a)	Raking out joint or cutting groove for turned-in edge of flashings shall be given in linear metres. Horizontal, raking, stepped, vertical and curved work shall each be so described. Pointing shall be given in the description.
		(b)	(b) Raking out and enlarging joint or cutting groove for nib of asphalt shall be given in linear metres. Horizontal, raking, vertical and curved work shall each be so described. Pointing shall be given in the description.
		(c)	(c) Dressing the face of rubble walling or similar facework to receive flashings and skirtings shall be given in the description.
Building in or cutting and pinning	G79	(a)	Building in metal windows, metal doors and the like (complete with frames) shall each be enumerated separately stating the overall size. Building in strong-room doors, safe-doors and the like (complete with frame) shall each be enumerated separately stating the overall size, the approximate weight and the floor level. Building in or cutting and pinning lugs, bedding frames and pointing to one or both sides shall be given in the description.
		(b)	Building in ends of lintels, steel sections, bearing bars, steps, timbers and the like as the work proceeds shall be deemed to be included with the walling items. No deduction shall be made for any ends mentioned in this sub-clause.
		(c)	Cutting and pinning ends of lintels, steel sections, tubular rails, steps, timbers, brackets and the like (grouped together) shall be enumerated irrespective of size. No deduction shall be made for any ends mentioned in this sub-clause.
Holes	G80	(a)	Holes for pipes, tubes, bars, cables, conduits and the like members (grouped together) shall be enumerated stating the sizes of the member and the thickness of the work. Fixing pipe-sleeves shall be given in the description.
		(b)	(b) Holes for ducting, trunking, tray and the like members (grouped together) shall be enumerated stating the size of the member and the thickness of the work.
Mortices	G81	(a)	Mortices and sinkings for ragbolts, bars, rails, and the like (grouped together) shall each be enumerated stating the depth in stages of 100 millimetres,. Running mortices with lead or mortar shall be given in the description.
Making good	G82	hereof s with any	good walls in connection with any of the labours mentioned in clauses G79, G80 and G81 hall be deemed to be included with the items. Making good fair face or facings in connection of the labours mentioned in Clauses G79, G80 and G81 hereof shall be given in the ion of such labours.
Air-bricks, ventilating gratings and soot-	G83	_	openings in walls and providing and building in air-bricks, ventilating gratings, soot-doors and shall each be enumerated separately stating the size of the opening, the nature of the wall

doors		and its thickness. Lintels and arches shall be given in the description.			
Flues	G84	(a) Parging and coring flues shall be given in linear metres stating the internal size of the flue where over 0.25 square metres in sectional area.			
		(b) Fireclay linings and precast concrete linings to flues shall each be given separately in linear metres stating the size. Cutting to form easings and bends in linings and cutting walls around linings shall be given in the description.			
Gas flue-blocks	G85	Flue-blocks shall be enumerated stating the type of blocks and the size and number of flues in each block. The method of building shall be described (e.g. built-in; free-standing). Rough cutting on walls around the flue-blocks shall be given in the description of built-in flue-blocks.			
Chimney-pots	G86	Chimney-pots shall be enumerated stating the type and the size. Setting and flaunching shall be given in the description.			
Stoves and surrounds	G87	(a) Stoves, grates, mantels, ranges and similar units shall each be enumerated separately stating the type and the size. Setting in fireplace opening and providing any concrete and brick backings shall be given in the description stating the width of the fireplace opening.			
		(b) Surrounds, hearths and similar units shall each be enumerated separately stating the size, the nature of the material (e.g. tile, marble) and the condition in which each unit is supplied (e.g. loose parts; pre-slabbed). Assembling and jointing or building up loose parts and setting shall be given in the description.			
Cramps	G88	Metal cramps, slate dowels, metal dowels, lead plugs and the like shall each be enumerated separately stating the size. Mortices and running with mortar or lead shall be given in the description.			
Coating backs of stones	G89	Coating backs of stones or blocks with slurry shall be given in the description of the walling on which it occurs. Coating with other material shall be given in square metres stating the kind of material.			
		CENTERING			
Centering generally	G90	(a) Particulars of the following shall be given: i. Nature of the surfaces to be supported (e.g. brick work; block work).			
		ii. Shape of surface (e.g. flat; segmental; semicircular; groined).			
		(b) Centering left in shall be so described.			
		(c) Centering with supports over 3.50 metres high shall be so described stating the height in further stages of 1.50 metres.			
		(d) Centering shall be measured as the actual surface to be supported. Strutting, shoring, bolting, wedging, easing, striking and removing shall be deemed to be included with the items.			
Flat soffits	G91	(a) Centering for flat soffits over 300 millimetres wide and not exceeding 2 metres span shall be given in square metres.			
		(b) Centering for flat soffits not exceeding 300mm wide & not exceeding 2 metres span shall be given in linear metres stating the width			
		(c) Centering for flat soffits over 2 metres span shall be enumerated stating the span of the opening and the width of the soffit.			
		(d) Centering for slopping soffits shall be so described			
Curved and vaulted soffits	G92	Centering for curved soffits and vaulted soffits shall each be given separately in square metres.			
Arches	G93	Centering for segmental, semicircular, invert and other curved arches shall each be enumerated separately stating the span of the opening and the width of the soffit. The rise shall also be stated except in the case of semi-circular arches.			
Labours on centering	G94	(a) Raking cutting, curved cutting, cutting to groin points, cutting to inter-sections, cutting against ribs and the like labours shall each be given separately in linear metres. Scribed edges and splayed edges shall be deemed to be included with the items.			
		(b) Notching for key blocks, projecting voussoirs and the like shall each be enumerated separately stating the size of girth.			

Supports to projecting stonework and tracery	G95	(a)	Supports to projecting masonry (e.g. corbel-courses; cornices, pediments; hoods) shall be given in linear metres of work to be supported stating the projecting.
		(b)	Strutting and ribbing for tracery work shall be enumerated stating the overall areas of the tracery.
Damp-proof courses generally	G96	Particula	rs of the following shall be given:-
			 i. Kind and quality of damp-proof materials ii. Gauge, thickness or substance (e.g. weight per square metre) or sheet material iii. Number of layers iv. Composition and mix of bedding material
State and sheet damp-proof courses	G97	(a)	Sheet damp-proof courses (e.g. bitumen-felt; sheet lead; sheet copper,) over 300 millimetres wide shall each be given separately in square metres. Such work not exceeding 300 millimetres wide shall be given in linear metres stating the width. No allowance in measurement shall be made for laps which shall be deemed to be included in the items. No deduction shall be made for voids not exceeding 0.50 square metre. Horizontal, raking, vertical and curved work shall each be so described. Cutting to curve shall be given in the description of work in curved walls.
		(b)	Damp-proof courses with cavity-gutters in hollow walls shall be so described
		(c)	Pointing exposed edges of damp-proof courses shall be deemed to be included with the

damp-proof courses

SECTION H

UNDERPINNING

The Unit of Billing Shall be the Metre

GENERALLY TO SECTION H

Underpinning	H1	(a)	Underpinning work shall be given as a Section in the bill				
generally		(-)					
		(b)	A description of the existing structure (e.g. wall; pier) to be underpinned shall be given stating its location, its length or size on plan, the depth of the new work below the base of the existing foundation and the limit of length to be carried out in one operation. Underpinning which is curved on plan shall be so described.				
		(c)	Underpinning required to be executed from inside existing buildings shall be so described. Handling materials and getting them in or out of such buildings shall be deemed to be included with the items.				
WORK IN ALL TRADES							
Work Generally	H2	-	oinning work shall be given in accordance with the rules in the relevant sections hereof except ified hereunder.				
Excavation	Н3	(a)	Temporary supports to work to be underpinned shall be given as an item. Particulars of such supports shall be given where practicable.				
		(b)	Allowances for working space (which shall not be subject to adjustments if more or less space is actually required) shall be made in the measurements of excavations. The width of the working space (measured horizontally from the face of the wall to be underpinned, or where projecting foundations are the face of the wall to be underpinned, or where projecting foundations are to be retained from the face of such projection) shall be related to the total depth of the excavation (measured from the top of the preliminary trench to the underside of the underpinning work). The allowances shall be as follows:-				
			 i. 1 metre from the wall or projecting foundation where the total depth of the excavation does not exceed 1.50 metres. ii. 1.50 metres from the wall or projecting foundation where the total depth of the excavation is over 1.50 metres but does not exceed 3 metres. iii. 2 metres from the wall or projecting foundation where the total depth of the excavation is over 3 metres. 				
		(c)	Excavation shall be given in accordance with Clause D5 to D17 here of subject to the following:-				

- following:-
 - Excavating preliminary trenches down to the level of the base of the existing foundation shall be so described.
 - ii. Excavating below the level of the base of the existing foundation shall be so described
- (d) Cutting away projecting foundations shall be given in linear metres stating the number of courses of footings and the dimensions of concrete to be removed.

SECTION J WATERPROOFING

The Unit of billing shall be the Metre GENERALLY TO SECTION J

			GENERALLY TO SECTION J
Works generally	J1	(a)	Work shall be grouped as follows and each group with its associated skirtings, angle-fillets and labours shall be given under an appropriate heading: i. Damp-proof and tanking ii. Paving iii. Roofing iv. Flooring and underlay
		(b)	Particulars of the following shall be given:-
			 i. Kind, quality and size of materials including underlay and reinforcement ii. Thickness and number of coats iii. Nature of base on which material is applied iv. Surfaces treatment with chippings, gravel, tiles and the like v. Method of fixing decking vi. Quantity of material in kilogrammes or litres per square metre to be applied to surfaces, and the number of coats
		(c)	Sheathing felt, cork, fibre or other underlay in contact with the material and any reinforcement shall be given in the description of the work in which they occur. Culling, notching, bending and lapping the underlay and the reinforcement shall be deemed to be included with the items. The fixing of the reinforcement on sloping surfaces shall be described.
		(d)	Work and labours executed overhand or in confined situations (where at least 1 metre of working space cannot be provided) shall each be so described.
		(e)	Work and labours on retaining walls, in sections, and after continuity of laying has been interrupted by temporary obstructions shall be each be so described. Jointing between sections shall be deemed to be included with the items.
		(f)	Curved work, conical work, spherical work and elliptical work shall each be so described irrespective of the radius. No distinction shall be made between straight and curved labours.
		(g)	Temporary rules shall be deemed to be included with the material items
Coverings to surfaces	J2	(a)	MASTIC ASPHALT Coverings shall be measured the area in contact with the base and shall include all labours
		(b)	Classifications shall be as follows:-
			 i. Flat coverings, covering to falls or cross-falls and sloping coverings not exceeding 15 degrees from horizontal (grouped together). Intersections on work to cross-falls shall be deemed to be included with the items. ii. Sloping coverings over 15 degrees but not exceeding 45 degrees from horizontal. iii. Sloping coverings over 45 degrees from horizontal and vertical coverings (grouped together).
		(c)	Coverings which will be subsequently covered shall be so described.
Coverings to surfaces		(d)	Coverings to soffits shall be so described
		(e)	Internal angle-fillets shall be given in linear metres and shall be deemed to be in two coats unless otherwise stated. Ends and angles shall be deemed to be included with the items
		(f)	Extra labour and material for turning coverings into grooves shall be given separately in linear metres
Skirtings fascias and aprons	J3		Skirtings, fascias and aprons shall each be given separately in linear metres stating the girth. Fair edges, drips, arises and the like and turning nibs into grooves shall be given in the description. Internal coved or angle fillets and tilting fillets shall be given separately in linear metres.
Gutters, valleys, and kerbs	J4	(a)	Linings to gutters, linings to valleys and coverings to kerbs shall each be given separately in linear metres stating the girth. Fair edges, arises and the like and turning nibs into grooves shall be given in the description. Internal coved or angle fillets and tilting fillets shall be

			given separately in linear metres. Stop ends and outlets shall each be enumerated separately
		(b)	Linings to isolated gutters and valleys shall each be so described
Channels	J5	(a)	Linings to channels shall be given in accordance with the rules for lining to gutters in J4 hereof.
		(b)	Forming shallow channels including additional materials shall be given in linear metres as extra over the covering in which they occur and stating the girth. Stop ends and outlets shall each be enumerated separately.
Cesspools and collars	J6	(a)	Linings to cesspools, sumps and the like shall each be enumerated separately stating the size. Arrises, internal angle-fillets and out lets shall be given in the description.
		(b)	Linings to bonding pockets, coverings to bonding blocks and the like shall each be enumerated separately stating the size. Arrises and internal angle-fillets shall be given in the description.
		(c)	Collars around pipes, standards and the like members (grouped together) shall be enumerated stating the size of the members. Arrises and internal angle-fillets shall be given in the description

SECTION K ROOFING The Unit of Billing shall be the Metre GENERALLY TO SECTION K

			GENERALLY TO SECTION K
Roofing Generally	K1	(a)	Work shall be grouped according to the kind of material and each group with its associated labours shall be given under an appropriate heading.
		(b)	Work to dormers and the like shall be so described
		(c)	Work to curved, conical and spherical roofs shall each be so described stating the radius or diameter at base. Work to elliptical roofs and other roofs curved to more than one radius shall be so described stating the radii.
		(d)	Work to turrets shall be so described stating the type (e.g., octagonal, conical), the diameter or size at base and apex, and the vertical height from base to apex. $ \frac{1}{2} \int_{-\infty}^{\infty} \frac{1}{2} \left(\frac{1}{2} \int_{-\infty}^{\infty} \frac{1}{2} \int_{-\infty}^{\infty} \frac{1}{2} \left(\frac{1}{2} \int_{-\infty}^{\infty} \frac{1}$
		(e)	Work shall be measured on the finished surfaces
		(f)	Colour of tiles/sheets, where applicable
			TILE ROOFING
Tile roofing	K2	Particular	s of the following shall be given:-
			 i. Kind, size, type, colour and quality of slates or tiles (e.g., asbestos-cement slates; clay-ware tiles, concrete tiles; shingles). ii. Extent of lap
			iii. Method of fixing and the number and kind of nails or pegs per slate or tile.iv. Size and type of laths or battens
Roof coverings	К3		erings shall be given in square metres. Coverings over 45 degrees from horizontal and overings shall each be so described.
Labours on roof coverings	К4	(a)	Square cutting around openings shall be given in linear metres. Square cutting against abutments and at top edges shall be deemed to be included with the roof coverings.
		(b)	Raking cutting and curved cutting shall each be given separately in linear metres.
		(c)	Holes for pipes, standards and the like members (grouped together) shall be enumerated stating the size of the members
Eaves	K5	metres. F description	ourse at eaves and extra undercourse at eaves shall each be given separately in linear Raking eaves and curved eaves shall each be so described. Bedding shall be given in the on stating the nature of the bedding material. Cut courses at eaves shall be deemed to be in the items.
Verges	K6	or specia	hall be given in linear metres. Raking verges, curved verges and verges with purpose-made I tiles shall each be so described. Extra undercloak course, bedding, pointing and finishing ent fillets shall be given in the description.
Valleys	K7	(a)	Cutting to valleys (measured to both sides) shall be given in linear metres. Oneand-half-width slates or tiles shall be deemed to be included with the items. Bedding and pointing to valleys (measured to both sides) shall be given in the description.
		(b)	Valley-tiles shall be given in linear metres as extra over the roof coverings in which they occur. Purpose-made valley-tiles shall be so described. Cutting and bonding to both sides shall be deemed to be included with the items.
		(c)	Laced or swept valleys shall be given in linear metres as extra over the roof coverings in which they occur. Cutting and bonding to both sides shall be deemed to be included with the items. Special finishes to tops or bottoms of valleys shall be enumerated stating the nature of the finish
Hips and vertical angles	К8	(a)	Cutting to hips and cutting to vertical angles (measured to both sides) shall each be given separately in linear metres.
		(b)	Hip tiles and vertical angle tiles shall each be given separately in linear metres. Purpose made hip tiles or angle tiles shall be so described. Cutting and bonding to both sides shall be deemed to be included with the items. Filled ends shall be enumerated. Fitted ends, mitred angles and mitred intersections shall be deemed to be included with the items.
Ridges and hip	К9	Ridge-ca	ppings and hip-cappings shall each be given separately in linear metres. Bedding and

cappings		pointing shall be given in the description. Filled ends, purpose-made tiles, vents, finials and the like shall each be enumerated separately. Fitted ends, mitred angles and mitred Intersections shall be deemed to be included with the items.
Special fillings	K10	Tile slips and other fillings shall each be given separately in linear metres. Bedding and pointing will be given in the description
Hip-irons	K11	Hip-irons shall be enumerated stating the method of fixing
Metal slates and soakers	K12	Metal slates and metal soakers shall each be enumerated separately stating the size
Glass tiles	K13	Glass tiles and the like shall be enumerated as extra over the coverings in which they occur
Lathing or battening	K14	(a) Lathing or battening shall be given in the description of roofing (see Clause K2 (iv) hereof).
		(b) Counter battening shall be given in square metres stating the size and spacing of the batterns and the method of fixing.
Under felting	K15	Underfelting shall be given in square metres stating the extent of the laps and the method of fixing.
Corrugated or troughed roofing generally	K16	CORRUGATED OR TROUGHED SHEET ROOFING Particulars of the following shall be given:-
generally		 i. Kind of sheeting (e.g. asbestors-cement; iron; steel; protected metal; aluminium) ii. Quality, colour and gauge of sheeting and type of corrugation or troughing. iii. Extent of side and end laps iv. Nature and general spacing of the structural supports (e.g. purlins). v. Method of fixing and sheeting vi. Material for bedding joints of sheeting stating which joints are to be bedded (i.e. horizontal, vertical or both).
Roof covering	K17	(a) Roof coverings shall be given in square metres, and shall include all cuttings and waste. Coverings over 45 degrees from horizontal and vertical coverings shall be so described.
		(b) Roof coverings which are fixed through an underlining laid over purlins shall be so described.
		(c) Cranks and upstands shall be given separately in linear metres as extra over the coverings in which they occur.
Labours on roof coverings	K18	(a) Square cutting around openings shall be given in linear metres except in cases where the work is designed to use standard sheets without cutting. Square cutting against abutments and at top edges shall be deemed to be included with the roof coverings.
		(b) Raking cutting and curved cutting shall each be given separately in linear metres.
		(c) Holes for pipes, standards and the like members (grouped together) shall be enumerated stating the size of the members
Filler pieces	K19	Filler-pieces at eaves and jambs and openings, filler-pieces above roof glazing and over lintols, flashing-pieces under roof glazing and the like shall each be given separately in linear metres.
Bedding and pointing	K20	Bedding and pointing at eaves, verges, and the like and bedding and pointing eaves filler pieces shall each be given in linear metres.
Ridge, hip and angle cappings	K21	Ridge-cappings, hip-cappings and vertical angle-cappings shall each be given separately in linear metres. Capped ends, capped angles, capped intersections, vents, finials and the like shall each be enumerated separately. Fitted ends shall be deemed to be included with the items.
Berge-boards	K22	Barge-boards and corner-pieces shall each be given separately in linear metres stating the width. Mitresd angles, mitred intersections, fair and fitted ends shall be deemed to be included with the items.
Flashings and expansion joints	K23	(a) Flashings and expansion joints shall be given separately in linear metres stating the overall girth.
		(b) Flashings around pipes, standards and the like members passing through sheeting shall be

enumerated stating the size of the members

Louvres	K24	Louvre-blac	des shall be given in linear metres stating the width or girth and the number
Roof-lights special sheets	K25		Fixed and opening roof-lights (exclusive of glass) shall each be enumerated and separately as extra over the roof coverings in which they occur stating the size.
			Transparent plastics shall be enumerated as extra over the roof coverings in which they occur stating the size.
			Ventilator-sheets shall be enumerated as extra over the roof-coverings in which they occur stating the size.
			Sheets with soaker-flanges for pipes shall be enumerated as extra over the roof coverings in which they occur stating the size of the pipe.
Roof Ventilators	K26	Roof ventila	ators shall be enumerated stating the size and the type of base.
Thatch roofing	K27	(a) I	THATCH ROOFING Particulars of the following shall be given:-
generally			 i. Kind of thatch (e.g. marsh-reed; straw; makuti) ii. Thickness of finished work where appropriate iii. Method of fixing
			Ridges, valleys, dormers and the like in a material different from the plain surfaces shall be so described.
Roof coverings	K28		Roof coverings (except to dormers and turrets) shall be given in square metres. over 45 degrees from horizontal and vertical coverings shall each be so described.
			Roof coverings to dormers shall be enumerated stating the size. Roof coverings to turrets shall be enumerated stating the type, the diameter or size at base and apex and the vertical height from base to apex.
			Stripping old thatch and associated work preparatory to re-thatching shall be given in square metres.
Labours on roof coverings	K29		Cutting and facing to top abutments, side abutments, tile valleys, metal valleys, chimneys and the like (grouped together) shall be given in linear metres.
			Holes for pipes, standards and the like members (grouped together) shall be enumerated stating the size of the members.
Eaves, verges, and hips	К30		es, hips, valleys, ridges and the like (measured extreme dimensions) where involving rials shall each be given separately in linear metres and described.
Wire netting	K31		Wire netting (measured the area covered) shall be given in square metres stating the mesh, the gauge, the extent of laps and the method of fixing. Strips to ridges, eaves, verges and the like shall be given in linear, metres stating the width
		(b) I	Raking cutting end curved cutting shall each be given separately in linear metres.
			ROOF DECKING
Roof decking generally	K32	Particulars	of the following shall be given:-
			 i. Kind of decking (e.g. asbestos-cement; steel; aluminium; wood-wool ii. Thickness and quality iii. Method of fixing iv. Nature and general spacing of the structural supports
Roof coverings	K33		rings shall be given in square metres. Coverings over 45 degrees from horizontal and verings shall each be so described.
Labours on roof coverings	K34		Square cutting around openings over 0.50 square metre shall be given in linear metres, except in cases where the work is designed to use standard sheets without cutting. Square cutting at abutments and elsewhere shall be deemed to be included with the roof decking.
		(b) I	Raking cutting and curved cutting shall each be given separately in linear metres.

		(c)	Holes for pipes, standards and the like members (grouped together) shall be enumerated stating the size of the members.
Bearings, eaves, kerbs and flashings	K35	_	eaves, kerbs, flashings and abutments with nibs built into chases shall each be given y in linear metres.
Waterproofing roofs generally	K36	(a)	WATER PROOFING ROOFS Particulars of the following shall be given:-
Series			 i. Type, quality and substance of covering (e.g. Bitumen felt) ii. Number of layers and extent of laps. iii. Nature of base on which material is laid iv. Method of bonding or securing to base and bonding of succeeding layers. v. Surface treatment with chippings, tiles, macadam, paints
		(b)	Screed, paper, cork, fibreboard or other underlay in contact with the material shall be measured separately or alternatively may be given in the description of the material in which it occurs.
Roof coverings	K37	Roof cove	rings shall be given in square metres. Classification shall be as follows:-
			 i. Flat coverings, coverings to falls or cross-falls and sloping coverings not exceeding 45 degrees from the horizontal (grouped together). Inter-sections on work to ross-fall shall be deemed to be included with the items. ii. Sloping coverings over 45 degrees from the horizontal and vertical coverings (grouped together).
Labours on roof coverings and underlays	K38	(a)	Raking cutting, curved cutting, fair edges, turning into grooves, wedging and the like labours shall each be given separately in linear metres.
		(b)	Notching, bending, extra material for laps and turning into grooves, trimming and jointing materials to flashings and the like labours shall be deemed to be included with the items.
		(c)	Working materials into outlet pipes, dishing to gullies and the like (grouped together) shall be enumerated irrespective of size.
Flashings, skirtings and aprons	K39	width. Fla include fo where cor roof cove shall each description	lown at eaves, verges and aprons shall be given separately in linear metres stating the ishings shall be given separately in linear metres stating the height, and shall be deemed to be rany turn-up of the main roof sheeting. The turn-up of main roof sheeting at abutments wered by a flashing of a different materials shall be added to the measurement of the main ring or given separately in linear metres stating the girth. Stepped work and raking work a be so described. Turning into grooves, wedging and the like shall be given in the inc. Cuttings, fair edges, angles, ends and extra felt for laps and for turning into grooves shall end to be included with the items.
Gutters, valleys and kerbs	K40	(a)	Linings to gutters, channels and valleys and coverings to kerbs shall each be given separately in linear metres stating the girth in contact with base. Gutters to falls shall be so described. Turning into grooves wedging and the like shall be given in the description. Cuttings, fair edges, dressing over tilting fillets, angles, intersections and extra material for laps and for turning into grooves shall be deemed to be included with the items. Stop ends and outlets shall each be enumerated separately.
		(b)	Linings to gutters channels and valleys of roof of other materials shall each be so described.
Channels	K41	the coveri	hallow channels including additional material shall be given in linear metres as extra over ing in which they occur stating the girth. Stop ends and outlets shall each be enumerated y. Angles, intersections and extra material for laps shall be deemed to be included with the
Sumps and collars	K42	(a)	Linings to sumps and the like (grouped together) shall be enumerated stating the size. Outlets shall be given in the description.
		(b)	Collars around pipes, standards and the like members (grouped together) shall be enumerated stating the size of the members.

Sheet metal roofing	K43	(a)	SHEET METAL ROOFING Particulars of the following shall be given:-	
generally	N43	(a)	Particulars of the following shall be given	
Benerany			i. Kind of metal (e.g. sheet zinc, sheet aluminium, she	eet copper).
			ii. Quality of metal	,
			iii. Gauge or thickness	
			iv. Method of jointing	
		(b)	In the absence of any directions to the contrary allowances sharea of the finished surface of sheet metalwork as follows:-	all be made in calculating the
			Item	Zinc, aluminium and
			i. For drips not exceeding 50 millimetres	copper 0.15 metres
			ii. For cross welts	0.10 metres
			iii. For wood-cored rolls not exceeding 50 millimetres	0.15 metres
			iv. For standing seams and welted seams	0.10 metres
			v. For edges-welts	0.05 metres
			vi. For vertical upstands	0.15 metres
			vii. For sloping upstands and for laps in pitched	0.30 for 30°
			roofing	0.2F for 2F°
				0.35 for 25° 0.45 for 20°
				0.60 for 15°
		(c)	Clips and tacks shall be given in the description stating the method of fixing. No allowance for them shall be made in the	
Do of coursings	V 4 4	Danf		laa.
Roof coverings	K44	KOOI COV	ering will be given in square metres. Classification shall be as fo	IOWS:-
			i. Flat roof coverings, roof coverings to falls and cross	falls and sloping roof
			coverings not exceeding 45 degrees from horizonta	
			ii. Sloping roof coverings over 45 degrees from horizo	ntal and vertical roof
			coverings (grouped together).	Slaves I/ E2 havesf)
			iii. Flat gutter coverings (for sloping gutter linings see 0	lause K 53 nereot)
Labour on sheet metals	K45	(a)	Raking cutting and curved cutting shall each be given separate	y in linear metres
		(b)	Notching and bending shall be deemed to be included with the	items
		(c)	Welted edges, beaded edges, wedging into grooves, burned or seams, burned or brazed seams and the like labours shall each linear metres.	_
		(d)	Dressing into hollows and over mouldings shall each be given stating the girth.	eparately in linear metres
		(e)	Dressing over glass and glazing bars, over corrugated roofin and over similar materials (measured flat) shall each be giver stating whether along or across the bars or corrugations.	
		(f)	Bossed, burned, brazed or capped ends, angles and intersection channels and mouldings shall each be enumerated separately.	ns to rolls, hollows,
		(g)	Dressing into outlet pipes, dishing to gullies and the like (group enumerated irrespective of size.	ped together) shall be
Copper nailing	K46	Nailing sh	nall be given in linear metres and described	
Collars around pipes and standards	K47	be enum	round pipes, standards and the like members passing through ro erated stating the size of the members and kind of pipe or stand hereto. Burned or brazed joints to sheet metal work shall be give	ard and the method of
Sumps and the like	K48	_	sumps and the like (grouped together) shall be enumerated star brazed angles shall be given in the description	ting the size. Outlets and

Dressing gutters through outlets dressing into rainwater heads and the like labour shall

SHEET METAL FLASHING, GUTTER LININGS AND METAL TRIMS

each be enumerated separately.

Sheet metal flashings

and gutter linings

K49

generally			
		(b)	Clips and tacks shall be given in the description stating the material to be used and the method of fixing.
Flashings	K50	(a)	Flashings, stepped flashings, aprons, weatherings to cornices, cappings to hips, ridges, kerbs, gutter linings and the like shall each be given separately in linear metres stating the girth.
		(b)	Welted edges, beaded edges, scalloped, or otherwise shaped edges, wedging into grooves, dressing over tilting fillets and the like labours shall be given in the description.
		(c)	Dressing into hollows, and over mouldings shall be given in the
		(d)	Dressing over glass and glazing bars, over corrugated roofing, over tiling, over pantiling and other similar materials (measured flat) shall be given in the description stating whether along or across the bars or corrugations.
		(e)	Dressing gutters through outlets dressing into rainwater heads and the like labour shall each be enumerated separately
		(f)	Bossed, burned or brazed ends shall be enumerated and described
Preformed flashings	K51	metres s	ed flashings and trims, aprons, cappings and the like shall each be given separately in linear stating the girth and describing the profile and the method of jointing. Angles and ends shall led to be included but preformed fittings shall be enumerated.
Flat gutters	K52	Flat gutter coverings shall be given in accordance with the rules for sheet metal roofing. (See Clause K44 (iii) hereof).	
Sloping gutters	K53	(a)	Linings to sloping gutters shall be given in linear metres stating the girth of the metal. Linings to secret gutters shall be so described.
		(b)	Dressing over tilting-fillets, wedging into grooves and the like labours shall be given in the description.
		(c)	Bossed, burned or brazed ends and angles, dressing through outlets, dressing into rainwater heads and the like labours shall each be enumerated separately.
Soakers and metal slates	K54	Collars a	g soakers and metal slates (for fixing by tiler) shall be enumerated separately stating the size. round pipes shall be given in the description of the metal slates stating the size of the pipe, of pipe and the method of joitning thereto.
Saddles	K55		over abutments and intersections of hips and ridges (grouped together) shall be enumerated the size of the metal. Dressing and bossing shall be given in the description

SECTION L

CARPENTRY

The Unit of Billing shall be the Metre

Carpentry generally	L1	(a)	Generally to Section L Particulars of the following shall be given:-
			i. Kind and quality of timberii. Preliminary treatment of timber (e.g. impregnation)
		(b)	Timber shall be deemed to be sawn on all faces and edges unless otherwise stated. Wrought timber shall be so described, giving the finished sizes.
		(c)	Timber shall be deemed to be fixed with nails or steel screws. Particulars of any other method of fixing shall be given in the description of the item concerned.
		(d)	Curved or circular work shall be so described stating the radius. Work curved to more than one radius shall be so described stating the radii. Curved labours shall be so described.
		(e)	Moulded work shall be so described
Structural timbers generally	L2	(a)	STRUCTURAL TIMBERS Structural timbers shall be measured the net length as fixed in the work and given in linear metres stating the nominal size and describing their functions. Joints in continuous lengths shall be taken every 6 metres.
		(b)	Structural timbers over 6 metres long in one length shall be so described stating the length in further stages of 1 metre.
Framed structural timbers	L3	particular in metres	e of framed structural timbers such as trusses, trussed rafters, and trussed beams, is shall be given of the overall span and rise, and the hoisting height (in number of storeys or). Framing plans and all available detail drawings of framed timber shall be provided with the constituent members of the frame shall be measured as provided in Clause L2 hereof.
Structural timber poles	L4	(a)	Structural poles shall be measured in linear metres (below and above the ground level) stating the nominal size, the method of fixing and the nature of base. Alternatively, they may be enumarated station their size, the overall height (below and above the ground level), the method of fixing and the nature of base. Those poles over 10 metres long shall be so described stating the length in further stages of 3 metres.
		(b)	Boring or excavating holes in ground for poles shall be enumerated stating the depth, the nature of the filling (e.g. excavated material, concrete) and the treatment of the spoil.
		(c)	Excavating pits and forming concrete bases for poles shall be given in accordance with the rules in Section D and F hereof.
Labours on structural timbers	L5	(a)	All cutting, scribing, splaying, notching, halving, morticing, tenoning and wedging shall be deemed to be included in the items. Dovetailed, scarfed and fingered joints shall each be enumerated. All the foregoing labours shall be deemed to include the additional timber required.
		(b)	Rebates, grooves, chamfers, rounded edges, moulded edges and the like labours shall each be described with the item or may be measured separately in linear metres. Ends, angles, stops and mitres in all labours shall be deemed to be included with the items.
		(c)	The following additional labours on structural timbers shall each be enumerated separately
			i. Wrought ends of timbers stating the length
			ii. Shaped, turned or moulded ends of timber stating the length.
Brandering and nogging	L6		ng and nogging between joists measured over the joists shall each be given separately in tres stating the sizes.
Cleats and sprockets	L7	Cleats, sp	rockets, and the like shall each be enumerated separately stating the size

BOARDING

		BOARDING
Boarding generally	L8	Boarding shall be measured as executed describing the function. No allowance shall be made for tongues in tongued and grooved work or for laps in weather-boarding and no deduction shall be made for voids not exceeding 0.50 square metres. Particulars of the following shall be given:-
		(a) i. Nominal thickness ii. Method of jointing iii. Surface treatment after laying
		(b) Boarding laid diagonally shall be so described
		(c) Boarding shall be given in square metres and the classification shall be as follows: i. Horizontal surfaces ii. Sloping surfaces not exceeding 45 degrees from horizontal iii. Sloping surfaces over 45 degrees from the horizontal and vertical surfaces
		(d) Work to falls and cross-falls shall be so described. Cutting at intersections on work to cross-falls shall be deemed to be included with the items. Firrings shall be given in linear metres stating the thickness and the average depth.
		(e) Drips in flats shall be given in linear metres stating the size.
Weather boarding	L9	Weather- boarding shall state the extreme thickness and width of the boards and the extent of the laps.
Gutter-boarding	L10	(a) Gutter- boarding and gutter -sides over 300 millimetres maximum width in each length shall each be given separately in square metres. Those not exceeding 300 millimetres maximum width in each length shall each be given separately in linear metres stating the average width.
		(b) Bearers shall be given in the description of gutter-boarding.
		(c) Gusset ends, drips and sumps shall each be enumerated separately irrespective of size.
Eaves and verge boarding	L11	(a) Boarding over 300 millimetres wide to eaves and the like (grouped together) together) shall be given in square metres. Boarding not exceeding 300 millimetres wide shall be given in linear metres stating the width.
		(b) Bearers for boarding shall be given in linear metres stating the size
Labours on boarding	L12	(a) Raking cutting, curved cutting and scribed edges on boarding and perimeter cutting on diagonally laid boarding shall each be given separately in linear metres.
		(b) Splayed edges on boarding shall be deemed to be included with the items
		(c) Rebates, grooves, chamfers, mitred angles and the like labours shall each be given separately in linear metres. Ends, angles and stops in all labours shall be deemed to be included with the items.
Fascia and barge boardings	L13	Fascia-boards and barge-boards shall each be given separately in linear metres stating the width
Fillets grounds and batterns generally	L14	FILLETS GROUNDS BATTENS AND BRACKETING (a) Fillet, grounds, batterns and the like shall be given in linear metres stating the size
		(b) Angle fillets, tilting fillets, corner fillets and rolls shall be given in linear metres stating the extreme size
		(c) Angles, ends, intersections, mitres and the like shall be deemed to be included with the items.
		(d) Clips for floors filletes shall be enumerated stating the method of fixing to concrete
Skeleton framework	L15	(a) Skeleton framework over 300 millimetres wide (measured overall) shall be given in square metres. Framework not exceeding 300 millimetres wide shall be given in linear metres stating the overall width of the framework. The size and the spacing of the members shall be given in the description.
		(b) Skeleton framework framed on rake and spandril-shaped framework (both measured net)

			shall each be so described. Skeleton framework of other irregular shapes shall be enumerated stating the size and shape of the framework and the size of the members.
		(c)	Alternatively the individual members may be measured in linear metres
Bracketing	L16	(a)	Bracketing to form shaped false ceilings shall be given in detail.
		(b)	Bracketing and cradling (measured the extreme girth) around steelwork and to form false beams shall each be given separately in square metres stating the size of the members. Alternatively the individual members may be measured in linear metres.
		(c)	Bracketing for cornices shall be given in linear metres stating the extreme girth. Angle brackets shall be enumerated.
			SUNDRIES
Plugging	L17		to concrete, brickwork, blockwork and stonework (grouped together) and irrespective of the inish) shall be given in square metres or in linear metres or enumerated (as may be

appropriate), or plugging may be given in the description of the work concerned and cradling.

SECTION M JOINERY The Unit of Billing shall be the Metre GENERALLY TO SECTION M

			GENERALLY TO SECTION M
Joinery Generally	M1	(a)	Particulars for the following shall be given
			i. Kind and quality of timberii. Preliminary treatment of timber (e.g. kiln drying, impregnation)
			ii. Preliminary treatment of timber (e.g. kiln drying, impregnation)
		(b)	Timber shall be deemed to be wrought on all faces and edges, giving finished sizes
		(c)	Timber shall be deemed to be fixed with nails or steel screws. Particulars of any other method of fixing shall be given in the description of the item concerned.
		(d)	Timber over 300 millimetres wide is one width shall be so described stating the width; where not in one width the method of joining shall be stated.
		(e)	Curved or circular work shall be so described stating the radius. Work curved to more than one radius shall be so described stating the radii. Curved labours shall be so described
		(f)	Rebates, grooves, chamfers, rounded edges, moulds not exceeding 50 millimetres girth and the1ike shall be termed labours. In members given in linear metres they shall be included in the description of the member on which they occur, stating the number (e.g. 100 millimetre by 50 millimeter frame with three labours). In work given in square metres the labours shall be given separately in linear metres. Ends, angles mitres, stops and the like shall be deemed to be included with the labours, Masons mitres, stops which are splayed, shaped or moulded shall each be enumerated separately1
		(g)	Where the girth of the mould on any member is over 50 millimetres, the girth shall _be; stated' in stages of 25 millimetres, except that any member which is fullymoulded shall be so described irrespective of the girth
		(h)	Ends, angles and mitres and the like shall be deemed to be included with the items.
		(i)	Where this section requires the sizes of panels to be stated they shall be grouped and described as follows. (Where panels of more than one size occur in any one sash, casement or door, the sizes shall be averaged for this purpose:-
			 i. Small (i.e. not exceeding 0.10 square metre each). ii. Medium (i.e. over 0.10 square metre but not exceeding 0.50 square metre each)
			iii. Large (i.e. over 0.50 square metre but not exceeding 1 square metre each) iv. Extra large (io.e. over 1 square metre each).
			FLOORING
Flooring generally	M2	(a)	Flooring shall be measured as executed. No. allowances shall be made for tongues in tounged and grooved work and no deduction shall be made for voids not exceeding 0.50 square metre. Particulars of the following shall be given:-
			i. Nominal thickness
			ii. Method of jointing iii. Surface treatment after laying
		(b)	Flooring laid to a pattern shall be so described.
Board flooring and strip flooring	M3	Board and strips	strip flooring shall be given in square metres stating the nominal width of the boards or
Cutting on flooring	M4	(a)	Raking cutting, curved cutting and scribed edges on board and strip flooring and perimeter cutting on pattern laid board and strip flooring shall each be given separately in linear metres.
		(b)	Cutting and fitting flooring around obstructions (e.g. detached columns; shaped ends of steps) notches, rounded corners, sinkings and the like shall be deemed to be included with the items.
Nosing and margins	M5	flooring in	bed-moulds and margins shall each be given separately in linear metres as extra over the n which they occur stating the size. Tongued edges, rounded edges and moulded edges, also n flooring shall be given in the description.
Access trap door	M6	Access tra	pdoors in floors shall be enumerated as extra over the flooring in which they occur stating

the size. Bearers shall be given in the description.

BOARDING OR PANELLED LININGS, CASINGS AND PARTITIONS

		BOARDI	NG OR PANELLED LININGS, CASINGS AND PARTITIONS
Linings, casings and partitions generally	M7	(a)	Boarded work shall be measured as executed. No allowance shall be made for tongues in tongued grooved work and no deduction shall be made for voids not exceeding 0.50 square metres. Particulars of the following shall be given:-
			 i. Nominal thickness ii. Type of boarding iii. Method of jointing iv. Width of boards where required of a specific width
		(b)	Pannelled work shall be measured as executed and no deduction shall be made for open panels of any size. Particulars of the following shall be given:-
			 i. Nominal thickness of the framing ii. Nominal thickness of the panels and where other than rectangular the shape and arrangement thereof. Where panels do not exceed 0.10 square metre each they shall be so described
		(c)	Panelled work with mouldings or bolection mouldings shall be so described stating whether worked on the solid or planted on and whether on one or both sides. Enriched mouldings and undercut mouldings shall each be so described.
		(d)	Panelled work with fielded panels, raised panels or raised and fielded panels shall each be so described.
		(e)	Panelled work with stiles, top rails or muntins over 100 millimetres wide, or with diminishing stiles, or with intermediate rails or bottom rails over 300 millimetres wide shall each be so described.
		(f)	Panelled work with curved heads (measured square) shall be so described stating the character of the curve (e.g. semicircular; segmental; elliptical)
Wall and ceiling linings	M8	(a)	Linings over 300 millimetres wide to walls and ceilings shall each be given separately in square metres. Those not exceeding 300 millimetres wide (except where caused by voids) shall each be given separately in linear metres stating the width, and where caused by voids shall be included with the work and given in square metres.
		(b)	Linings to ceilings over 3.50 metres above floor shall be so described stating the height in further stages of 1.50 metres.
		(c)	Panelled linings framed on rake and spandril-shaped panelled linings (both measured net) shall each be so described. Panelled linings of other irregular shapes shall be enumerated stating the size and shape of the framework.
Beams and column casings	M9	(a)	Casings (measured on external face) around sides and soffits of beams, lintols, cantilevers, pilasters, columns and the like (grouped together) shall be given separately in square metres except that casings with entasis shall be given in linear metres stating the maximum and the minimum girth and the number of casings.
		(b)	Casings around beams over 3.50 metres above floor (measured from ceiling level) shall be so described stating the height in further stages of 1.50 metres.
		(c)	Panelled casings framed on rake (measured net) shall be so described.
Cuttings on linings and casings	M10	(a)	Cuttings on the individual boards of conical boarding, spherical boarding and on groined boarding shall be deemed to be included with the items.
		(b)	Splayed edges on boarding shall be deemed to be included with the items
		(c)	Rounded corners and the like shall each be enumerated separately stating the girth.
Applied mouldings	M11		nouldings (other than panel moulds), cappings, inlays and the like shall each be given y in linear metres stating the size. Enriched mouldings and undercut mouldings shall each cribed.
Caps and bases to columns	M12	-	bases to columns and pilasters shall each be enumerated separately stating the site. s, mouldings and the like labours shall be given in the description.
Pipe casings	M13	Casings (r	measured on external face) around pipes shall each be given separately in linear metres

stating the girth and the number of sides.

Access trap doors

M14

Access trap doors in linings and casings shall be enumerated as extra over the work in which they occur stating the size. Bearers shall be given in the description

DOORS, WINDOWS, SKYLIGHTS AND LANTERNS

Doors

M15

(a)

- Doors shall be given in square metres irrespective of type (i.e. no distinction being made between single, folding, swinging and sliding doors) stating the thickness and the number of doors (each leaf being counted as one door). Fitting and hanging doors shall be deemed to be included with the items. Alternatively doors may be enumerated stating the size. Doors shall be classified as follows:
 - i. Flush doors stating the construction of the core, the finished thickness of the door, the kind, quality and thickness of the facing material and the method of fixing the facing material to the core. Solid lipping (to one or both vertical edges or to all four edges) and applied mouldings shall be given in the description. Openings in flush doors for glass shall be enumerated as extra over the doors in which they occur stating the size of the opening. Openings divided into panes shall be so described stating the size of panels and where other than rectangular the shape and arrangement thereof. Glazing beads shall be given in the description or in linear metres stating the size.
 - ii. Boarded doors stating the thickness of the boardings, ledges, braces and framing and the method of jointing the board covering or filling.
 - iii. Panelled doors stating the nominal thickness of the framing, the number and nominal thickness of the panels and where moulded stating whether the mouldings are worked on the solid or planted on and whether on one or both sides. Panelled doors with open panels for glass shall be so described. Open panels divided into panes shall be so described stating the size of the panes and where other than rectangular the shape and arrangement thereof. Glazing beads shall be given in the description or in linear metres stating the size. Panelled doors with top rails or muntins over 100 millimetres, or with diminishing stiles or with intermediate or bottom rails over 300 millimetres shall each be so described.
- (b) Doors not exceeding 1 square metre in area or 1 metre in height shall be so described.
- (c) Doors of irregular shape (measured square) shall be described.
- (d) Doors with curved heads (measured square) shall be so described stating the character of the curve (e.g. semi-circular; segmental; elliptical).

Casements

M16

(a)

- Casements shall be given in square metres stating the thickness and the number.

 Alternatively casements may be enumerated stating the size. Fitting and hanging casements shall be deemed to be included with the items. Those divided into panes shall be so described stating the size of the panes and where other than rectangular the shape and arrangement thereof. Glazing beads shall be given in the description or in linear metres stating the size.
- (b) Bullseye casements shall be enumerated stating the thickness and the overall diameter.
- (c) Casements of irregular shape (measured square) shall be so described
- (d) Casements with curved heads (measured square) shall be so described stating the character of the curve (e.g., semi-circular, segmental, elliptical).

Double-hung sash windows

M17

- (a) Double-hung sash windows shall be measured over the frames and sills
- (b) Double-hung sash windows (complete with sashes, frames and sills) shall be enumerated stating the size or given in square metres stating the number of windows, the thickness of the sash and the sizes of the various parts of the frame and sill. Sashes divided into panes shall be so described stating the size of the panes. Glazing beads shall be deemed to be included with the items. Pulleys, cords, chains and weights or spring balances shall be given in the description. Fitting and hanging sashes shall be deemed to be included with the items.
- (c) Multiple-light double hung sash windows shall be so described. Solid mullions and cased mullions shall be given in the description stating the size of the members.
- (d) Windows of irregular shape (measured square) shall be so described.
- (e) Windows and curved heads (measured square) shall be so described stating the character

			of the curve (e.g. semi-circular; segmental; elliptical).
Skylights and lanterns	M18	(a)	Skylights and lantern-tops shall each be given separately and enumerated stating the size or alternatively given in square metres stating the thickness and the number. Glazing bars and fitting and hanging sky-lights shall be given in the description. Glazing beads shall be deemed to be included with the items.
		(b)	Lantern-sides shall be given according to the rules for casements.
		(c)	Rolls to ridges and hips (grouped together) shall be given in linear metres stating the size.
Windows-boards and nosings shall be given	M19		v-boards, nosings and bed moulds shall each be given separately in linear metres stating the number. Tongued edges, rounded edges, moulded edges and bearers in the description.
Frames, sills and kerbs	M20	(a)	FRAMES, SILLS AND KERBS Frames, mullions, transomes, sills and kerbs shall be measured the length as fixed in the work. Framed ends, framed angles, framed intersections, halved and dovetailed joints, scarfed joints and the like shall be deemed to be included and to include the additional timber required.
		(b)	Members over 6 metres long in one length shall be so described stating the length in further stages of 1 metre.
		(c)	Door-frames, window frames (except to double-hung sash windows and to bullseye windows) lanten-frames, mullions, transomes, sills and kerbs shall each be given separately in linear metres stating the size. Frames to bullseye windows and the like shall be enumerated stating the size and overall diameter.
		(d)	Heading-joints in curved frames and in curved transomes shall be given in the description of the member but joints at the apex of shaped heads shall be enumerated. Keys, wedges and hand-rail screws shall be given in the description.
			FILLETS, GLAZING BEADS AND GROUNDS
Fillets	M21	(a)	Weather fillets and the like shall be given in linear metres stating the size. Those which are tongued on shall be so described.
		(b)	Stop-fillets around doors and casements shall be given in linear metres stating the size. Cut and mitred stop-fillets around centre-hung casements shall be so described.
Glazing beads and glazing fillets	M22	•	beads and the like except where otherwise included with the items shall be given in linear stating the size.
Grounds and wall batterns	M23		s (or battens) shall be given in linear metres stating the size, or they may be given in the ion of the work concerned.
Skirtings, architraves, picture-rails and cornices	M24	(a)	Skirtings, architraves, picture-rails, dado-rails, wall mouldings, cornices, cappings, pelmets, cover-fillets and the like shall each be given separately in linear metres stating the size.
		(b)	Built-up members shall be so described stating the size of each component. Bracketing shall be given in the description.
		(c)	Plinth-blocks to architraves shall be enumerated stating the size.
Shelves, table-tops and seats	M25	(a)	SHELVES, TABLE-TOPS AND SEATS Shelves, divisions, table-tops, work-tops, counter- tops, seats and the like over 300 millimetres wide shall be given in square metres stating the thickness. Such work not exceeding 300 millimetres wide shall be given in linear metres stating the width and the thickness.
		(b)	Slatted shelves and seats shall each be given separately in square metres stating the size and spacing of the slats and battens.
		(c)	Bearers and legs shall be given in linear metres stating the size. Framed work shall be so described.
Cuttings and housings on shelves, table-tops and seats	M26	(a)	Raking cutting, curved cutting and scribed edges shall each be given separately in linear metres.

		(b)	Rounded corners and the like shall be enumerated separately stating the girth.
		(c)	Housings, tongued and grooved joints, ship-lap joints and the like shall each be given separately in linear metres.
Draining-boards and back-boards	M27	(a)	DRAINING-BOARDS AND BACKBOARDS Draining-boards shall be given in square metres stating the thickness and the number. Those which are fluted on the surface shall be so described. Labours to edges shall be given in linear metres and openings shall be enumerated. Alternatively, draining-boards may be enumerated in which case the thickness and size shall be stated and all labours given in the description.
		(b)	Back-boards shall be enumerated stating the size. Labours to edges shall be given in the description.
Fittings	M28	(a)	FITTING AND FIXTURES Fittings and fixtures (e.g. cupboards; tables; work-benches; and counters; dressers; bookcases) shall be given in detail in fixtures accordance with the relevant Clauses hereof, each under an appropriate heading stating the Overall size. Alternatively, they may be enumerated and fully described. Fittings and fixtures of a similar character may be grouped together.
		(b)	Drawers shall be enumerated stating the overall dimensions, the thickness of the component parts and the method of jointing together
Applied coverings	M29	(a)	Applied coverings (e.g., plastics subject to clause 25 (a) hereof) shall be given in square metres stating the method of securing. Alternatively, they may be given in the description of the work on which they occur stating whether on one or both sides. Splayed edges and chamfered edges to coverings shall be deemed to be included with the items.
		(b)	Applied coverings on edges shall be given in linear metres stating the width.
		(c)	In all cases applied coverings shall be fully described
Staireasas ganarally	N420	Morkin	STAIRCASES
Staircases generally	M30		staircases shall be given under an appropriate heading.
Landings	M31	(a)	Landings shall be given in square metres stating the thickness and the method of jointing. Bearers shall be given in the description.
		(b)	Raking cutting and curved cutting shall each be given separately in linear metres
Treads and risers	M32	(a)	Treads and risers (grouped together) shall be given in square metres stating the thickness and the method of jointing and blocking together. Winders (measured net) and their risers shall be so described. Carriages shall be given in the description stating the size.
		(b)	Raking cutting and curved cutting on treads (but not on winders) shall each be given separately in linear metres.
		(c)	Ends housed to strings shall be deemed to be included with the items.
		(d)	Returned ends, rounded ends, quadrant ends and curtail ends shall each be enumerated separately.
Strings apron-linings and mouldings	M33	stating the and mitr ramps ar	apron-linings, cappings and applied mouldings shall each be given separately in linear metres ne size. Ramped members and wreathed members shall each be so described. Ends, angles es, returned ends, and housed ends shall be deemed to be included with the items. Short and short wreaths shall each be enumerated as extra over the member in which they occur. t-pieces and the like shall each be enumerated separately stating the size.
Handrails	M34	(a)	Handrails shall be given in linear metres stating the size. Curved handrails, ramped handrails and wreathed handrails shall each be so described. Quadrants, ramps and wreaths not exceeding 0.50 metres girth shall each be enumerated separately as extra over the members in which they occur, one quadrant or wreath being taken for each quarter- turn or less.
		(b)	Framed ends, housed ends, dowelled ends, rounded ends, moulded ends, scrolled ends, mitred angles, irregular angles, and the like to handrails shall each be enumerated separately. Ends on rake shall be so described. The overall size of scrolled ends shall be stated. Heading joints shall be deemed to be included with the items and handrail screws

shall be given in the description.

			shall be given in the description.
Balusters and newels	M35	(a)	Balusters shall be enumerated stating the size and the length. Framed ends and housed ends shall be given in the description stating if on rake.
		(b)	Newels and storey-posts shall be enumerated and where turned the length of the turned portion shall be stated. Sunk panels in newels and mouldings planted on or housed in shall each be enumerated.
		(c)	Newel-caps and pendants shall each be enumerated separately stating the size, the shape and the method of fixing.
			CTANDADD UNITC
Standard units	M36	cupboar	STANDARD UNITS attern units and standard units (eg doors; casement windows; double-hung sash windows; ds) shall be enumerated stating the appropriate reference. Ironmongery normally supplied indard units shall be given in the description.
			SUNDRIES
Plugging	M37	surface fi	to concrete, brickwork, blockwork, and stonework (grouped together and irrespective of the inish) shall be given in square metres or in linear metres or enumeated (as may be ate); or plugging may be given in the description of the work concerned.
Holes in Timber	M38	(a)	Holes and countersunk holes for bolts and the like shall each be enumerated separately stating the size of the bolt and the thickness of the timber. Pellating shall be given in description.
		(b)	Holes for pipes, tubes, bars, cables, conduits and the like members (grouped together) shall be enumerated stating the size of the member as Clause A4 hereof and the thickness of the timber. Fixing pipe-sleeves shall be given in the description.
		(c)	Holes for ducting, trunking, trays and the like members (grouped together) shall be enumerated stating the size of the member and the thickness of the timber
			IRONMONGERY
Ironmongery	M39	(a)	Particulars of the following shall be given:-
			i. Kind and quality of ironmongery
			ii. Surface finishiii. Nature of the background (e.g. timber, metal) to which items are fixediv. Method of fixing
		(b)	Preparing timbers to receive ironmongery (e.g. sinking; boring; grooving; morticing) shall be deemed to be included with the items.
		(c)	Stock-pattern or standard units (or sets) of ironmongery shall be enumerated stating the appropriate reference. Fixing with screws to match shall be deemed to be included with the items. Alternatively, supplying some or all of the ironmongery may be given as a provisional or prime cost sum as Clause A7 hereof (which shall be deemed to include supplying screws to march) in which case fixing the units (or sets shall be enumerated. Where an item of fixing involves handling an ornamental or unusually expensive units (or sets) particulars of the character and value shall be given in the description.
		(d)	In the case of fanlight openers and lantern-gearing, the character of the gearing and the method of securing shall be described.
		(e)	In the case of sliding-door gear, each component shall be itemised in detail and the method of securing described
Waterbars	M40		ers in sills and the like shall be given in linear metres stating the size. Those bedded in ad or mortar shall be described.
Dowels and cramps	M41		and cramps shall each be enumerated separately stating the size. Mortices in timber shall be the description.
Bolts	M42	Bolts sha description	Il be enumerated stating the diameter and length. Nuts and washers shall be given in the on.

SECTION N

			SECTION N STRUCTURAL STEEL WORK
			The Unit of Billing shall be the Kilogramme
			GENERALLY TO SECTION N
Structural steelwork generally	N1	(a)	Steelwork shall be grouped as follows and each group with its associated labours shall be given under an appropriate heading:-
			 i. Unframed steelwork (i.e. steel mainly or completely unframed) ii. Framed steelwork (i.e. in structures mainly or completely framed)
		(b)	Particulars of the following shall be given:- i. Kind and quality of steel
			ii. Any tests of materials, workmanship and finished structure.
		(c)	In the case of framed steelwork, particulars shall also be given of the method of fabrication and the type of site connections (eg riveted; bolted; turned-bolted; welded). Framing plans and all available detail drawings of framed steelwork shall be provided with the bill but where this is not practicable, the work shall be described in detail stating the area on plan, the number of storeys and the overall height of each block.
		(d)	Work in position involving extra handling or fixing between existing work shall be so described stating the location.
		(e)	Steelwork shall be measured as executed but no deduction shall be made for splay cuts, notches, holes and slots and no allowances shall be made for rolling margin or the weight of weld-metal. Plates of irregular shape shall be measured net. All cuttings, welds, notchings and the like labours shall be deemed to be included with the items.
		(f)	The weight given for compound or composite members (e.g. compound girders; roof trusses) shall be the aggregated weight of the component parts together with the weight of the bolts and rivet-heads.
		(g)	Where steel sections are required to be classified in accordance with this Clause, they shall be grouped and described as follows:-
			 i. Angled and tees (grouped together) ii. Joists and channels (grouped together). iii. Broad-flange joists and universal joists (grouped together). iv. Castellated joists
		(h)	Where the weight-groups of steel sections are required to be stated in accordance with this Clause, the weights per linear metre shall be grouped and described as follows:-
			i. Not exceeding 5 Kilogrammes
			ii. Over 5 kilogrammes but not exceeding 10 Kilogrammes
			iii. Over 10 kilogrammes but not exceeding 20 Kilogrammes
			iv. Over 20 kilogrammes but not exceeding 50 Kilogrammes
			 v. Over 50 Kilogrammes but not exceeding 100 Kilogrammes vi. Over 100 kilogrammes but not exceeding 150 Kilogrammes
			vii. Over 150 kilogrammes
		(j)	Steel sections (except those forming part of compound or composite members) in length not exceeding 1.50 metres shall be so desribed
		(k)	Curved steel sections (except those forming part of compound or composite members) shall be so described stating the length, the radius or radii of the curve and whether curved in the width or the depth.
		(1)	Curved compound or composite members shall be so described stating the radius or radii and whether curved in the width or the depth.
		(m)	Cranked members shall be so described stating the number of cranks
			GRILLAGES AND GIRDERS
Grillages	N2	(a)	Grillages shall be given in kilogrammes.
		(b)	Plain grillages (i.e. those consisting of joists or channels) shall be so described and the components classified as Clause N1 (g) stating the weight-group as Clause N1 (h) hereof.

(c)

Compound grillages shall be so described and the components classified in accordance with the rules for compound girders in Clause N4 (c) hereof.

Girders	N3	(a)	Girders shall be given in kilogrammes.
		(b)	Plain girders (i.e. those consisting of joists or channels) shall be so described and classified as Clause N1 (g) hereof stating the weight group as Clause N1 (h) hereof.
		(c)	Compound girders shall be so described and classified as follows:-
			i. Compound single (i.e. those consisting of one joist or channel with one or more
			flange-plates.) ii. Compounds multiple (i.e. those consisting of two or more joists or channels with one or more flange-plates):-
		(d)	Plate girders shall be so described and classified as follows stating the composition and depth (except where shown on the drawings provided):-
			 i. Plain plate (i.e. those consisting of one web-plate with angle-flanges). ii. Compound plate (i.e. those consisting of one web plate with angle flanges and
			one or more flange-plates). iii. Box plate (i.e. those consisting of two web-plates with angle flanges and two or more flange - plates
		(e)	Shelf-angles and stiffener-angles (grouped together) on girders shall be given i in kilogrammes stating the weight-group of the angles as Clause N1 (h) hereof. Those required to be fitted to the girder shall be so described.
		(f)	Latticed girders shall be so described stating the length and the composition and depth (except where shown on the drawings provided).
		(g)	Runway rails for travelling cranes on girders shall be given in the description of the girder to which they are attached stating the shape of the cross-section and the method of fixing. The weight of the runway rails together with the weight of the associated fastenings shall be aggregated with the weight of the girder.
Stanchions	N4	(a)	STANCHIONS, COLUMNS AND PORTAL FRAMES Stanchions shall be given in kilogrammes
		(b)	Plain stanchions (i.e. those consisting of joists or channels) shall be so described and classified as Clause N1 (g) hereof stating the weight- group as Clause N1 (h) hereof and the number of stanchions.
		(c)	Compound stanchions shall be so described and classified as follows stating the number of stanchions:-
			Compound single (i.e. those consisting of one joist or channel with one or more flange- plates). Compound multiple (i.e. those consisting of two or more joists or channels with one or more flange- plates).
		(d)	Latticed stanchions and battened stanchions shall each be so described stating the number of stanchions and the composition (where not shown on the drawings provided).
		(e)	Bloom bases to stanchions shall be given in kilogrammes stating the number of bases, the method of attachment and the extent of machining required.
Solid or tubular columns	N5	(a)	Solid steel columns shall be given in kilogrammes stating the diameter and the number of columns.
		(b)	Tubular steel columns shall be given in linear metres stating the thickness of the metal, the outside diameter and the number of columns
Portal frames	N6	Portal fra	imes shall be given in kilogrammes stating the composition and the span.
Roof trusses	N7	(a)	ROOF MEMBERS, BRACES, STRUTS AND RAILS Roof-trusses shall be given in kilogrammes stating the span in stages of 3 metres, the rise and the composition (except where shown on the drawings provided).
		(b)	Gable-trusses, hip-trusses, half-trusses and valley-trusses shall each be so described.
Gables, hips and valleys	N8		embers, hip-members, valley-members and the like (grouped together) shall be given in s and classified as Clause N1 (g) hereof stating the weight group as Clause N1 (h) hereof.

53

Purlins rails	N9	(a)	Purlins and rails shall be given in kilogrammes or alternatively in linear metres and stating the weight.
		(b)	Plain purlins and plain rails (grouped together) shall be so described and classified as Clause $\bf N1$ (g) hereof stating the weight group as Clause $\bf N1$ (h) hereof.
		(c)	Compound purlins, compound rails, battened purlins and battened rails (grouped together) shall be so described.
Braces and struts	N10		truts and the like (grouped together) shall be given in kilogrammes and classified as Clause N1 of stating the weight-group as Clause N1 (h) hereof
			SUNDRIES
Fittings	N11	(a)	Fittings to unframed steelwork (e.g. caps; bases; splice-plates; cleats; brackets; stiffeners; distance- pieces; separators) shall each be enumerated separately stating the size and method of fixing. Notchings, bolts, rivets and welds shall be given in the description of the fittings.
		(b)	Fittings to framed steelwork shall be deemed to be included with the items and the weight of the fittings together with the weight of associated bolts and rivet heads shall be aggregated with the weight of the member to which they are attached.
Holes	N12	enumera be made	ountersunk holes and tapped holes which are required for other trades shall each be sted separately stating the size of the hole and the thickness of the metal. Those required to on site shall be so described. All other holes shall be deemed to be included with the items unframed and framed steelwork.
Site rivets	N13	(a)	Driving rivets on site shall be deemed to be included with the items. The weight of the heads of the rivets shall be aggregated with the weight of the work in which they occur.
		(b)	Countersinking rivet heads on site shall be enumerated
Wedging bases and grillages	N14		g under stanchion-bases and under steel grillages shall each be enumerated separately tive of the number of wedges.
Turned bolts	N15		bolts shall be enumerated stating the diameter and the length. Nuts and washers shall be the description.
Anchor bolts	N16	Anchor- the desc	bolts shall be given in kilogrammes stating the diameter. Nuts and washers shall be given in ription.
Gutters	N17	(a)	Gutters in conjunction with structural steel work shall be given in kilogrammes or alternatively in linear metres stating the shape of the cross section, the thickness of the metal and the method of jointing and securing.
		(b)	Gutter fittings (e.g. bends, junctions, angles; stopped ends; outlets) shall each be enumerated separately as extra over the gutters in which they occur.
Painting	N18	painted :	by the steel fabricators or erectors shall be given in squaremetres of the surface to be stating the preparation of surfaces, the number of coats to be applied and whether executed eelworks or at the site before erection or after erection. The parts to be treated shall be escribed

SECTION P METAL WORK

The Unit of billing shall be the Metre GENERALLY TO SECTION P

			GENERALLY TO SECTION P
Metal work generally	P1	(a)	Particulars of the following shall be given:-
			i. Kind and quality of metal
			 Gauge, thickness or substance of metal and wire, both for the material and the labours thereon.
			iii. Method of fixing, stating the nature of the background or support to which
			the metalwork is fixed.
		(b)	Patterns for work required to be cast shall be deemed to be included with the items.
		(c)	Work shall be deemed to be purpose-made unless otherwise described.
		(d)	Work required to be welded shall be so described stating whether:-
			i. Members shall be welded and left as laid
			ii. Members shall be fillet-welded and left as laid
			iii. Members shall be prepared, welded and ground to smooth finish
		(e)	Work required to be primed or painted before delivery to site shall be so described.
		(f)	Work required to be galvanized, chromium-plated, stove-enamelled, anodized or otherwise treated shall be appropriately described stating whether treated before or after manufacture or assembly
		(g)	Curved work shall be so described stating the radius
		(h)	Work shall be measured as executed but no deduction shall be made for notches, holes and slots and no allowance shall be made for rolling margin or weld metal.
		,	NORK IN PLATES, BARS, SECTIONS AND TUBES
Plates, bars, sections	P2		ates, bars, sections and tubes shall be deemed to be formed by casting, rolling, drawing,
and tubes generally		extruding specifical	g or other appropriate method at the contractors option unless a particular method is
		эрсенией	y stated.
Floor-plates and ductcovers	P3	(a)	Floor-plates shall be given ins square metres stating the average size. Chequer plates and perforated plates shall each be so described.
		(b)	Duct covers shall be given in linear metres stating the width. Chequer plates and perforated plates shall each be so described.
		(c)	Frames for duct covers shall be given in linear metres stating the size and the shape of the cross section. Lugs shall be given in the description stating the spacing. Ends, angles and intersections shall each be enumerated separately.
		(d)	Raking cutting and curved cutting on plates, shall each be given separately in linear metres.
Burglar bars and grilles	P4	(a)	Burglar bars shall be given in linear metres stating the size. Fanged ends, twists, bends and the like shall be enumerated separately.
		(b)	Ornamental grilles shall be enumerated stating the size, pattern and method of fixing.
		(c)	Burglar proofing of flat bars forming part of and attached to windows shall be enumerated in panes (irrespective of size) stating the size of the bars. Alternatively, burglar proofing may be given in the description of the unit to which it is attached
Handrails and core- rails	P5	(a)	Handrails and core rails shall each be given separately in linear metres stating the size and the shape of the cross section. Fanged ends, rounded ends, scrolled ends, mitred angles, bends, ramps, wreaths and the like shall each be enumerated separately.
		(b)	Handrails brackets shall be enumerated stating the size and the girth
Arch-bars, bearers and stays	P6		s, bearers, stays and the like shall each be given separately in linear metres stating the size. ands, twists, bends, and the like shall be enumerated separately.
Straps, collars and brackets	P7	Straps, co stating th	ollars, hangers, cantilever-brackets, corbels and the like shall each be enumerated separately ne size.

Mat-frames	P8		mes shall be enumerated stating the size of the members and the overall size of the frame. Il be given in the description stating the number.
			WORK IN SHEET METAL
Coverings and linings	P9	(a)	Coverings to doors, bench-tops, counter tops and the like shall each be given separately in square metres. Bending at edges shall be deemed to be included with the item.
		(b)	Linings to safes, cisterns, sinks and the like shall each be given separately in square metres. Bending at edges shall be deemed to be included with the items.
		(c)	Raking cutting and curved cutting shall each be given separately in linear metres.
		(d)	Welted or beaded edges, burned, brazed or welded angles, welted seams and the like labours shall each be given separately in linear metres.
		(e)	Dressing into hollows, dressing over curbs and the like labours shall each be given separately in linear metres. Bossed, brazed or welded ends, angles and intersections shall each be enumerated separately.
		(f)	Clout nailing, copper nailing and screwing at edges of coverings and linings shall each be given separately in linear metres. Close nailing and close screwing (i.e. where spacing does not exceed 50 millimetres) shall be so described.
Wire mesh and expanded metal generally	P10	(a)	WORK IN WIRE MESH OR EXPANDED METAL Mesh coverings and expanded metal coverings over 300 millimetres wide to partitions, door panels and windows shall each be given separately in square metres stating the size of mesh. Such coverings not exceeding 300 millimetres wide shall each be given separately in linear metres stating the size of mesh and the width in stages of 100
		(b)	millimetres.
		(b)	The method of fixing (e.g. beads, staples, welding) shall be stated.
		(c)	Raking cutting and curved cutting shall each be given separately in linear metres
Composite units generally	P11	to P15 he	COMPOSITE UNITS te units (other than standard units) shall be measured in detail in accordance with Clause P12 ereof and each unit with its associated labours shall be billed under an appropriate heading ne character, the overall size and the number of units. Classification shall be as follows:-
			 i. Balustrates stating whether level of raking ii. Railings stating whether level or raking iii. Gates stating the shape where other than rectangular iv. Grilles and gratings (grouped together) stating the shape where other than rectangular v. Cloak-room fittings vi. Cycle racks, storage racks and the like (grouped together) vii. Ladders viii. Staircases, landings and gangways (grouped together). ix. Framework and other supports for partitions, false ceilings, lift enclosures and the like (grouped together). x. Tubular roof trusses. xi. Tubular purlins xii. Tanks stating the shape where other than rectangular
Members of composite units	P12	(a)	Rolled plates over 300 millimetres in both dimensions shall be given in square metres. Those not exceeding 300 millimetres in one dimension shall be given in linear metres stating the width. Those not exceeding 300 millimetres in both dimensions shall be enumerated stating the size.
		(b)	Rolled or extruded bars, sections and tubes shall each be given separately in linear metres stating the size.
		(c)	Cast members shall be enumerated stating the size the shape and the character. Standard castings shall be so described. Lugs cast on shall be given in the description stating the number.
Labours on members of composite units	P13	(a)	Raking cutting and curved cutting shall each be given separately in linear metres
		(b)	Notches, slots and rounded corners shall be deemed to be included with the members

of composite units.

		of composite units
		(c) Fanged ends, pointed ends, rounded ends, bends, ramps, wreaths, twists and the like shall each be enumerated separately.
Openings partitions of composite units	P14	Opening portions in balustrades, railings and the like shall each be enumerated separately as extra over the work in which they occur stating the overall size. Hinges and fastenings shall be given in the description stating the type.
Connections between members of composite unit	P15	(a) Cleated connections and plated connections shall each be between enumerated separately stating the size of the cleat units or plate and the members of thickness of the metals to be connected. Irregular connections composite units shall be so described. Setscrews, bolts, nuts, washers, rivets, holes, countersunk holes, tapped holes, welds, spot welds and the like shall be given in the description stating the size.
		(b) Bolted connections, screwed connections and welded connections shall each be enumerated separately stating the thicknesses of the metals to be connected. Irregular connections shall be so described. Setscrews, bolts, nuts, washers, holes, countersunk holes, tapped holes, welds, spot-welds and the like shall be given in the description stating the size.
Special metal windows and doors	P16	Special metal windows and special metal doors shall each be enumerated separately stating the overall size, the nature of the construction, the shape where other than rectangular, the finish and the number of opening portions.
Standard units generally	P17	STANDARD UNITS Assembling and jointing together the component parts of composite units and providing any necessary jointing compound shall be deemed to be included with the item concerned.
Standard metal windows and doors	P18	(a) Standard metal windows and doors (complete with frames, mullions, transoms, hinges, fastening and lugs) shall each be enumerated separately stating the type. Composite windows and composite doors shall each be described.
		(b) Steel accessories (e.g. sub-frames, subsills, window-boards and window surrounds) shall be enumerated separately stating the size and the type.
Steel door frames	P19	Steel door-frames (except those forming an integral part of a door unit) shall be enumerated stating the size and the type.
Fireproof doors and strongroom doors	P20	Fireproof doors and strongrooms doors (complete with frames, hinges, fastenings and lugs) shall each be enumerated separately stating the size and the type.
Roof-lights	P21	Lantern-lights, skylights, laylights, and the like (complete with frames, mullions, ridges, hips, hinges, fastenings and lugs) shall each be enumerated separately stating the size and the type. Composite units shall be so described.
Pavements lights and stallboard lights	P22	Pavement lights and stallboard lights (complete with frames, lugs and glass lenses) shall each be enumerated separately stating the size and the type.
Skirtings, picture-rails purlins and the like	P23	Skirtings, picture-rails, and the like shall each be given separately in linear metres stating the size and the type. Fitted ends, mitred ends and the like shall be deemed to be included. Special fittings shall each be enumerated separately.
Duct covers	P24	Duct-covers (complete with frames and lugs) shall be given in linear metres stating the width and the type. Ends, angles and intersections shall each be enumerated separately.
Balustrades and railings	P25	Balustrades, railings and the like forming part of a building shall each be given separately in linear metres stating the height and described.
Collapsible gates and revolving shutters	P26	Collapsible gates, revolving shutters and the like (complete with frames, guides, tracks, and fastenings, lugs and the like) shall each be enumerated separately stating the size and the type.
Grilles and gratings	P27	Grilles and gratings (complete with frames and lugs) shall each be enumerated separately stating the size and the type.
Surface boxes and mat-rims	P28	Surfaces-boxes, inspection-covers, mat-rims and the like (complete with frames and lugs) shall each be enumerated separately stating the size and the type.
Sectional tanks	P29	Sectional tanks shall be enumerated stating the capacity, the size and the type

SUNDRIES

Holes and slots	P30	(a)	Holes for pipes, tubes, bars, cables, conduits and the like members (grouped together) shall be enumerated stating the size of the member as Clause A4 hereof and the thickness of the metal.
		(b)	Other holes, countersunk holes, tapped holes, slots and the like (except where deemed to be included or where given in the description of other items) shall each be enumerated separately stating the size of hole or slot and the thickness of the metal.
Bolts	P31	Bolts, anchor-bolts, ragbolts, and the like (except where deemed to be included or where given in description of other items) shall each be enumerated separately stating the diameter and the leng Nuts and washers shall be given in the description	

SECTION Q

PLUMBING AND DRAINAGE INSTALLATIONS THE UNIT OF Billing shall be the Metre GENERALLY TO SECTION O

Plumbing and drainage installation generally

Q1

Work shall be grouped as follows and each group shall be given under an appropriate (a)

heading:-

- i. Rainwater installation
- ii. Cold and hot water installation
- iii. Fire fighting installations
- iv. Foul drainage above ground
- Sanitary installations ٧.
- Particulars of the following shall be given:-(b)
 - Any regulations, rules, byelaws and the like with which the installation is required to comply.
 - ii Kind of material
 - iii. Quality of Materials
 - Gauge thickness or substance of material iv.
 - Any tests with which materials, plant and equipment are required to comply
- Assembling and jointing together the component parts of composite units and providing (c) any necessary mating flanges and jointing materials shall be deemed to be included with the items concerned. Where composite units are supplied by the employer, particulars of the assembly work involved shall be given.
- Patterns, moulds, templets and the like shall be deemed to be included with the items. (d)
- Work required to be primed or painted before delivery to the site shall be so (e) described.
- (f) Work required to be galvanised, chromium-plated, stove-enamelled, porcelainenamelled, anodized or otherwise specially finished shall be appropriately described stating whether treated before or after manufacture or assembly.
- The method of fixing and the provision of nails, bolts, nuts, holes, screws, plugs, shot-fired (g) pins and the like shall be given in the description of the work. For cutting and pinning see Clause Q40 hereof.
- The nature of the background to which work is fixed shall be given in the description of the (h) work. Backgrounds shall be grouped and described as follows:-
 - Building -board (which shall be deemed to include hard-board, abestos cement sheet, plaster-board, fibreboard and similar materials which do not grip a wood-screw).
 - ii Timber (which shall be deemed to include softwood, hardwood, blockboard, plywood and similar materials which will grip a wood-screw when a lead-hole has been drilled).
 - iii. Metal-faced or composition-faced timber (which shall be deemed to include faced block-board, faced plywood and similar materials which will grip a wood screw when a lead-hole and a shank-clearance hole have been drilled).
 - Brickwork, concrete or stonework (which shall be deemed to include reinforced iv. concrete, block-work and similar material which require plugging) irrespective of any plaster, composition or other finish (excluding glass of glazed tiles) to the
 - Backgrounds as (iv) but finished with glazed tiles or similar materials. V.
 - vi. Plain metal (which shall be deemed to include any metal which requires
 - vii. Glass (which shall be deemed to include any materials resembling glass).
- (i) Temporary work shall be so described. Removing temporary work and making good after, shall be deemed to be included with the items.
- (j) Adequate drawings and specifications of installations shall be provided with the bill.
- Heating, ventilating and air-conditioning work within boiler-houses and plant rooms and (k) such work external to buildings shall be so described in each case.



GUTTERWORK

Gutters generally	Q2		er gutters (measured over all gutter- fittings, short running lengths and branches) shall be linear metres stating the type and the size.
Curved gutters	Q3	Curved go	utters shall be so described stating mean radius
Cutter-joints	Q4	(a)	Providing materials, bolts, nuts, washers and everything else necessary for jointing shall be deemed to be included with the items of gutter work.
		(b)	Joints in the running length shall be given in the description of the gutter stating the method of jointing.
Gutter fittings	Q5	(a)	Gutter-fittings (e.g. bends; angles, shoes, offsets, elbows; junctions; stopped ends; nozzle outlets) etc. shall each be enumerated separately as extra over the gutter in which they occur. Cuttings and jointing the gutters to gutter-fittings shall be deemed to be included with the gutters.
		(b)	Weep pipe, spreaders, gargoles, rainwater heads etc shall be given in numbers
Gutter-supports	Q6	Lugs cast	on to gutters, brackets and straps shall be given in the description of the gutter
			PIPEWORK
Pipes	Q7	(a)	Pipes (measured over all pipe-fittings, short running lengths and branches) shall be given in linear metres stating the type and the nominal size. The method of jointing shall be stated. Classification shall be according to the purpose for which the pipes are installed (e.g. over-flow, waste, soil and ventilation, cold water service, high pressure coldwater supply, water main, cooling water, condense water, hot water service, flow and return header pipes, low pressure hot water heating, high pressure hot water heating, steam heating stating the pressure and the temperature, low-pressure hydraulic, high-pressure hydraulic, gas, compressed-gas, compressed-air, oil, smoke-flue, gas-flue).
		(b)	Flexible pipe and extensible pipes (measured as fully extended) shall each be so described.
		(c)	Pipes laid or fixed in ducts, trenches and chases shall be so described in each case.
		(d)	Pipes embedded in floor screed shall be so described
		(e)	No distinction shall be made between pipes fixed vertically, horizontally or to fulls.
Special pipework	Q8	(a)	Curved pipes shall be so described stating the mean radius
		(b)	Wrapped, coated or lined pipework shall be so described stating the type of treatment.
		(c)	Pipework required to be temporarily fixed in position, dismantled for chromium-plating and subsequently refixed shall be so described.
Pipe joints	Q9	(a)	Providing materials, heat, bolts, nuts, washers and everything else necessary for making joints in pipes shall be deemed to be included with the items.
		(b)	Joints and connectors in the running length shall be given in the description of the pipe stating the method of jointing.
		(c)	Ornamental joints in the running lengths shall be enumerated as extra over the pipe in which they occur.
		(d)	Reducing joints between pipes of different sizes shall be enumerated as extra over the main pipe in which they occur. Classification shall be as follows:-
			i. Soldered branch jointsii. Welded reducing joints
		(e)	Branch joints shall be enumerated as extra over the main pipe in which they occur. Perforating the pipe shall be deemed to be included with the items. Classification shall be as follows:- i. Soldered branch joints ii. Welded branch joints stating the type of branch (e.g. square; angle; sweep).
		(f)	Screwed sockets, tappings, bosses and welding-necks welded to pipes or flanges shall each be enumerated separately stating the size and kind of pipe or flange concerned.

Perforating the pipe or flange shall be deemed to be included with the items.

- (g) Special connections and special joints in pipes shall each be enumerated separately (except where given in the description of another enumerated item) stating the size and kind of pipe concerned and the method of jointing. Classification shall be as follows:
 - i. Connections between pipes of differing materials
 - ii. Connections between pipes and appliances or equipment stating the nature of the appliance or equipment.
 - iii. Isolated joints which differ from those given in the description of the pipe (e.g. flanged joints in pipes having welded joints generally).
 - iv. Expansion joints stating the type of joint (e.g. bellows; sliding) and the amount of the expansion to be accommodated.
- (h) Connecting ends of flue pipe to boilers, stone chimneys and the like shall each be enumerated separately stating the size and kind of pipe concerned, the method of jointing and the type of packing required.

			and the type of packing required.		
Labours on pipes	Q10	•	Labours (e.g. made bends, made springs, made offsets) on pipes of all diametres shall each be enumerated separately as extra over the pipe on which they occur.		
Pipe fittings	Q11	(a)	Pipe fittings (e.g. bends, springs, swan-necks, offsets, Y- junctions, double Y-junctions, shoes, blank flanges, puddle flanges, bushes, reducers, elbows, twin-elbows, tees, crosses, unions) except fillings as Clause Q9 (b) shall each be enumerated separately as extra over the pipes in which they occur. Culling and fitting the pipes to all fittings shall be deemed to be included with the items.		
		(b)	Pipe closers to be measured on site and cut to exact length shall be given in number as extra over the pipe in which they occur.		
Pipe supports	Q12	(a)	Particulars of the method of fixing shall be given in the description of pipe-supports as Clause Q1 (g) hereof. Culling and pinning ends of pipe supports shall be given in the description of the items.		
		(b)	Ears cast, soldered or welded on to pipes shall be given in the description of the pipe.		
		(c)	Pipe-supports (e.g. clips; saddles; pipehooks; holderbats) shall be given in the description of pipes.		
		(d)	Brackets; rollers; chairs and hangers; back-plates; and girder-lugs; anchors and guides for supporting pipes shall each be enumerated separately stating the size of the component and the size and kind of pipe. Spring compensated components shall be so described stating the loading and the movement to be accommodated.		
		(e)	Pipe-stays and collars shall be enumerated stating the size and kind of pipe and the length of the stay.		
		(f)	Pylons and other pipe-supports shall each be enumerated separately stating the size, the method of fixing and the nature of the structure.		
Pipe-sleeves and plates	Q13	(a)	Pipe-sleeves shall be enumerated stating the length thereof, the size and kind of pipe passing through and the type of packing required.		
		(b)	Wall-plates, floor-plates and ceiling plates shall each be enumerated separately stating the size thereof and the size and kind of pipe passing through. Where plates are fitted to pipe-sleeves they shall be given in the description of the sleeve stating whether to one or both ends.		
Inspection doors	Q14	method o	n doors in pipes shall be enumerated as extra over the pipe in which they occur stating the of sealing the door. Where such doors occur in pipe-fittings they shall be given in the on of the fitting concerned.		
Dampers	Q15	Dampers of operati	in pipes shall be enumerated as extra over the pipe in which they occur stating the method ion.		
Traps, thimbles ferrules, and cones	Q16		mbles, ferrules, cones and the like shall each be enumerated stating the size thereof, if pipe and appliances to which is attached and the method of jointing thereto.		
Rainwater – heads roof-outlets	Q17		Rainwater, roof-outlets and the like shall each be enumerated separately stating the type, the size and the method of jointing.		

Hopper-heads	Q18		eads and the like shall be enumerated stating the type thereof, the kind of pipe to which ned and the method of jointing.
Gratings	Q19	Gratings s	hall be enumerated stating the size of pipe or outlet to which it is attached
Cowls, terminals, etc.	Q20	(a)	Cowls, terminals, hinged flaps, cross-wired ends and the like shall each be enumerated separately stating the size and kind of pipe to which it is attached and the method of jointing thereto.
		(b)	Flashing-plates, weathering-aprons, cravats and the like shall be enumerated separately stating the size thereof and the size and kind of pipe passing through.
Exhaust heads	Q21	Exhaust h	eads shall be enumerated stating the number, type and size of the connections.
Driptrays tundishes	Q22	Drip-trays of the con	and tundishes shall each be enumerated separately and stating the number, type and size nections
Independent chimneys	Q23	(a)	Independent vertical steel chimneys shall be enumerated stating the internal diameter and the method of jointing. Base-plates, linings, claddings, anchor bolts, guy-ropes, ladders, guard-rails, painter's hooks, cleaning-doors, cowls, terminals and the like shall be given in the description stating the number, the type and the size.
		(b)	Connections to boilers and connections to stone chimneys shall each be enumerated separately stating the method of jointing and the type of packing required
Connections	Q24	work which	g the ends of pipes at public mains, making good public highways and to mains any other the may only be carried out by a public undertaking or local authority shall be given as a all of prime cost sum as Clause A7 hereof.
Equipment generally	EQUIPI Q25		S, SANITARY AND FIRE FIGHTING APPLIANCES AND ANCILLARIES of equipment shall be enumerated and fully described
Water tanks	Q26	separatel the conne	n tanks, water-storage tanks and condense-water tanks shall each be enumerated y stating the type, the nominal or actual capacity in litres and the number, type and size of ections for pipes and mountings. Standing over-flows, access-holes and covers shall be the description stating the number, the type, and the size.
Hot water and thermal storage cylinders	Q27	(a)	Hot water cylinders and thermal-storage cylinders shall be enumerated separately stating be nominal or actual capacity in gallons, the working and test pressures, the maximum operating temperature and the number, type and size of the connections for pipes and mountings. Access-holes, covers and internal fittings shall be given in the description stating the number, the type and size.
		(b)	Electrical immersion-heaters shall be given in the description of the cylinders stating the loading. For electrical connections see Section S hereof.
Appliances generally	Q28	deemed to	ng, providing mating flanges, couplings and everything necessary for jointing shall be to be included with the appliance items. The method of fixing and jointing to service and ses shall be stated.
Sanitary appliances	Q29	drinking fo	atory-basins, wash-tubs, showers, WC pans, WC suites, sinks, urinals, flushing cisterns, buntains and the like shall each be enumerated separately stating the type and the size. brackets shall be given in the description.
Fire-fighting appliances	Q30	_	ng appliances, foam-inlets, hydrants, extinguishers, blankets, buckets, fire house reels, nnections, pressure gauges and the like shall each be enumerated separately stating the the size.
Ancillaries generally	Q31	(a)	Providing mating flanges, couplings, and everything necessary for jointing shall be deemed to be included with the ancillary items.
		(b)	Notwithstanding the following provisions for the enumeration of ancillaries, where such items form an integral part of the equipment to which they relate, or where they are required to be supplied by the manufacturer of the equipment to which they relate, they shall be given in the description of the equipment concerned.
Valves and cocks	Q32	the size. detail of described	ocks taps and other special fittings shall each be enumerated separately stating the type and Those with extended spindles shall be so described stating the length of the spindle and integral locking devices and remote operating gear. Those with hose-unions shall be I. Connecting ends of valves, cocks, and the like to pipes and appliances shall be given in the ons stating the kind and type of pipework and appliance and the method of jointing thereto.

Sleeves and holes	Q33	(a)	Sleeves shall be given in number grouped for pipes not exceeding 100m diameter and thereafter in stages of 100m, separated in successive lengths of 250m long
Thermal insulation generally	Q34	(a)	THERMAL INSULATION Particulars of the following shall be given:-
			i. Kind of insulating materialii. Thicknessiii. Finishiv. Method of fixing
		(b)	Smoothing the insulation material and working around supports (e.g. hangers; brackets) shall be deemed to be included with the insulation items.
Insulation to plant	Q34	(a)	Insulation to cylinders; tanks; and the like shall be enumerated stating the overall size or the unit. Particulars shall be given of any protection to the insulation.
		(b)	Working insulation around pipes, fittings and the like shall be deemed to be included
Insulation of pipework and fittings	Q35	(a)	Insulation to pipework shall be given in linear metres stating the type and bore of the pipe. Particulars shall be given of any protection to the insulation.
		(b)	Working insulation around valves, gauges, and over flanges and pipe fittings and the like shall be deemed to be included. Particulars shall be given of any boxes for valves.
		(c)	Sectional insulating coverings to pipework shall be so described and given in accordance with paragraph (a) of this Clause.
		(d)	Fitting sectional coverings around pipe-fittings shall each be enumerated separately as extra over the sectional coverings in which they occur.
		(e)	Flanged joints in sectional coverings shall each be given in the description stating protection to the insulation. whether boxes are required. Isolated flanged joints (i.e. where not consistent with the general method of jointing described) shall be enumerated as extra over the sectional coverings in which they occur.
			SUNDRIES
Marking positions	Q36		g the position of holes, mortices, chases and the like in the structure for each installation deemed to be included.
Plans of the installation	Q37	-	tion plans or diagrams of the installation as fitted shall be given as an item stating the kind of tion to be shown and the number of copies of each drawing required to be provided.
Testing the installations	Q38	Testing 6	each installation shall be given as an item and fully described
			BUILDER'S WORK
Builder's work generally	Q39	under a	s work in connection with plumbing and drainage installations shall be grouped together in appropriate heading and where required to be executed by the plumber or engineer it shall escribed and billed with the installation concerned.
Cutting and pinning	Q40	_	pinning and making good ends of supports for equipment, appliances, fittings and the like enumerated or may be included with the description of the support.
Cutting away and making good	Q41	Cutting	away for and making good after the plumbers and engineers shall be given as follows:-
			 i. Holes for pipes and the like shall be given in accordance with the rules in the appropriate section hereof. ii. Mortices, sinkings and the like shall each be enumerated separately stating the size thereof and the nature of the structure. iii. Cutting chases shall be given in linear metres stating the size of the pipe classified in accordance with Clause A4 hereof and the nature of the structure

SECTION R MECHANICAL ENGINEERING INSTALLATIONS The Unit of Billing shall be the Metre

			GENERALLY TO SECTION R
Mechanical engineering installation generally	R1	(a)	Work shall be grouped as follows and each group shall be given under an appropriate heading
			PIPED SYSTEMS i. Heating, cooling and refrigeration installations
			ii. Ventilation and air-conditioning installations
			iii. Hydraulic installation
			iv. Compressed air installation
			v. Gas Installation
			vi. Refuse chutes
			vii. Laboratory/Industrial waste drainage
			viii. Centralised vacuum cleaning
			ix. Compactors/macerators
			x. Incineration plant
			xi. Swimming pool water treatment
			CONVEYING INSTALLATIONS xiii. Lift installations
			xiv. Hoists escalators, moving pavements conveyor installations
			xv. Cranes, travelling cradles, goods distribution and mechanized warehousing installation.
			xvi. Mechanical and preumatic document conveying installations.
			xvii. Automatic document filing and retrieval installations.
		(b)	Particular requirements shall be in accordance with section Q1 (b) $-$ (j)
		(c)	Heating, ventilating and air-conditioning work within boiler-houses and plant rooms and such work external to building shall be so described in each case.
Measurement of pipework	R2		Measurement of pipework shall be given in accordance with section Q hereof
			DUCTINORY
Ducting	R3	(a)	DUCTWORK Ducting (measured over all duct-fittings, short running lengths and branches) shall be given in linear metres stating the size. Stiffeners shall be given in the description.
		(b)	Flexible ducting and extensible ducting (measured as fully extended) shall each be so described.
		(c)	Curved ducting shall be so described stating the mean radius
		(d)	Lining ducting internally with acoustic or protective material shall be given in the description of the ducting
		(e)	Distinction shall be made between ducting fixed vertically, horizontally or ranking and between ducting fixed to different elements.
Ducting joints	R4	(a)	Providing materials, heat, bolts, nuts, washers and everything else necessary for making joints in ducting shall be deemed to be included with the items.
		(b)	Joints in the running length shall be given in the description of the ducting stating the

method of jointing.

- (c) Special connections and special joints in ducting shall be enumerated separately (except where given in the description of another enumerated item) stating the size and kind of ducting concerned and the method of jointing. Classification shall be as follows:
 - i. Connections between ducting of different materials
 - Connections between ducting and equipment stating the nature of the equipment.
 - iii. Isolated joints which differ from those given in the description of the ducting (e.g. flanged joints in ducts having spigot and socket joints generally).
 - iv. Flexible connections between ducting and plant

Ducting fittings R5

Ducting-fittings (e.g. stop-ends; bends; offsets; diminishing pieces; change-of-section pieces; junction pieces; nozzle outlets) shall each be enumerated separately as extra over the ducting in which they occur. Where there is a preponderence of fittings (e.g. in plant rooms), they shall each be enumerated separately as individual items. Cutting and jointing ducting to the fittings and forming openings in ducting for branches shall be deemed to be included with the ducting. Forming and stiffening openings in ducting shall be given in the description.

Ducting supports

R6

- (a) Particulars of the method of fixing shall be given in the description of ducting supports as Clause Q1 (g) hereof. Cutting and pinning ends of ducting supports shall be given as Clause Q45 hereof.
- (b) Components for supporting ducting (eg brackets; hangers) shall be enumerated stating the size of the component and the size of the ducting. Spring compensated components shall be so described stating the loading and the movements to be accommodated.

Extract-hoods cowls and terminals

R7

Extra-hoods, cowls, terminals and the like shall each be enumerated separately stating the size and type thereof, the size of the ducting to which it is attached and the method of jointing thereto.

Ducting, insulation and protection

R8

Insulation and protection wrappings, coatings and linings to ducting shall be given in linear metres measured to the external and internal surface of the ducting and description shall be deemed to include working around ducting fittings. Alternatively, wrappings, coatings and linings may be included in the description of the ducting.

EQUIPMENT: DIFFUSERS, GRILLES, ATTENUATORS, DAMPERS, FILTERS, LIFTS, HOISTS, CRANES, ESCALATORS, MATERIAL HANDLING INSTALLATIONS, DISPOSAL INSTALLATIONS, AND ANCILLARIES

F٥	uinment	generally
LU	uipiiieiit	generany

R9

All items of equipment shall be enumerated and fully described.

Diffuses, grilles, attenuators dampers and filters

R10

Diffusers, Grilles, attenuators, dampers and filters shall each be enumerated separately stating the type and size of the connections for pipes and mountings.

Lifts

R11

- (a) Lift installations shall be suitably grouped under heading stating whether a single lift or a bank of lifts.
- (b) Cars shall be given in number and descriptions shall include frames, guides, enclosures, base, car doors, inspection doors, sills, internal finishes, fittings such as handrails, mirrors etc and lighting and ventilation requirements
- (c) Entrances shall be given in number and the descriptions shall include frames and building in, sills, landing doors, door opening devices, locking and safety devices, etc.
- (d) Power units shall be given in number and descriptions shall include supports, sheaves, sound reducing material, switching equipment, etc.
- (e) An item shall be given for each of the following:-
 - Support work in lift shafts comprising guide rails, brackets, plates, buffers, supports, sheave, beams, etc.
 - ii. Robes comprising cables, clamps, etc
 - iii. Counterweights comprising frames, guides, compensation, etc
 - iv. Governors and safety gear

- Operation and control system comprising car operator panels, car position and direction indicators, landing position and direction indicators, call buttons, lanterns and gongs, load weighting devices, intercommunication, detectors, wiring etc.
- vi. Temporary use of lifts comprising temporary enclosures, protection, finishes, etc., refurbishment, completion and recommissioning.

Hoists, escalators and conveyor installations	R12	Hoist escalator and conveyor installation shall be given in accordance with the rules of clause R10 hereof.
Material handling installations, disposal installations, etc	R13	Installations such as material handling, refuse disposal, waste compaction incineration, etc., shall be given in accordance with the foregoing rules.
Testing and commissioning	R14	An item shall be given for testing and commissioning and descriptions shall include details of any prescribed tests, and requirements such as provision of instruments and appliances, performance logging, fuel, power, water, etc.
Drawings, manuals, etc	R15	An item shall be given for the provision of fitted drawings, manuals, operative training, etc.
Identification markets	R16	Description shall be deemed to include identification markers, direction indicators, labels, legend cards, etc.
Replacement parts	R17	Replacement parts, tool kits. etc., shall be enumerated.
Works by other trades	R18	Works by other trades integral with mechanical installations shall be given in accordance with the rules of relevant trades

SECTION S

ELECTRICAL AND ELECTRONIC INSTALLATIONS

The Unit of Billing shall be the Metre GENERALLY TO SECTION S

Electrical installation	
generally	

S1 (a)

- Work shall be grouped as follows and each group shall be given under an appropriate heading:-
 - Main Switchgear (e.g. high-voltage gear; transformers; medium voltage gear) and any other equipment serving more than one distribution group.
 - ii. Power-distribution
 - iii. Lighting
 - iv. Heating
 - v. Ventilating and air-conditioning
 - vi. Telephones
 - vii. Bells
 - viii. Clocks
 - ix. Sound-distribution
 - x. Signals
 - xi. Fire-alarms
 - xii. Burglar-alarms
 - xiii. Earthing conductors
 - xiv. Lightning conductors
- (b) Particulars of the following shall be given:
 - i. Type of installation
 - Any regulations, rules, byelaws and the like with which the installation is required to comply
 - iii. Kind of material (e.g. cast iron; sheet steel; sheet copper; drawn copper).
 - iv. Quality of material
 - v. Gauge, thickness or substance of material
 - vi. Any tests with which materials, plant and equipment are well required to comply.
 - vii. Type and voltage of the main electricity supply stating the location of the main supply point
- (c) Assembling and jointing together the component parts of composite units and providing any necessary jointing material shall be deemed to be included with the items concerned. Where composite units are supplied by the employer, particulars of the assembly work involved shall be given.
- (d) Patterns, moulds templets and the like shall be deemed to be included with the item
- (e) Work required to be primed or painted before delivery to the site shall be so described
- (f) Work required to be galvanized, chromium-plated, stove-enamelled, anodized or otherwise specially finished shall be appropriately described stating whether treated before or after manufacture or assembly.
- (g) The method of fixing and the provision of nails, bolts, nuts, holes, screws, plugs, short-fired pins and the like shall be given in the description of the work.
- (h) The nature of the background to which work is fixed shall be given in the description of

the work. Backgrounds shall be grouped and described as follows:-

- Building-board (which shall be deemed to include hardboard, asbestoscement sheet, plaster-board, fibreboard and similar bases which do not grip a wood-screw).
- Timber (which shall be deemed to include softwood, hardwood, blockboard, plywood and similar bases which will grip a wood-screw when a lead hole has been drilled).
- iii. Metal- faced or composition-faced timber (which shall be deemed to include faced blockboard, faced plywood and similar bases which will grip a wood screw when a lead-hole and a shank clearance hole have been drilled
- iv. Brickwork, concrete or stonework (which shall be deemed to include reinforced concrete, blockwork and similar bases which require plugging) irrespective of any plaster, composition or other finish (excluding glass and glazed tiles) to the surface.
- v. Backgrounds as (iv) but finished with glazed tiles or similar materials
- vi. Perforated metal (which shall be deemed to include slotted steel) cabletray and similar metal which does not require drilling).
- vii. Plain metal (which shall be deemed to include any metal which requires drilling). Temporary work shall be so described.
- viii. Glass (which shall be deemed to include any material resembling glass)
- (j) Temporary work SHALL BE SO DESCRIBED. Removing temporary work and making good after shall be deemed to be included with the items
- (k) Adequate drawings and specifications of the electrical installations shall be provided with the bill.

FOUIPMENT AND CONTROL-GEAR

- Equipment S2 Equipment (e.g. prime-movers; generators; motors; fans; mechanical drives; batteries; rectifiers; circuit-breakers; feeder-pillars; transformers) shall each be enumerated separately stating the rated capacity and the type. Connecting the cable-tails shall be deemed to be included with the items.
- Control-gear

 S3

 Control-gear (e.g. fuse-and-link disconnecting boxes; isolator-switches; changeoverswitches; switch-fuses; fused-switches; distribution boards; contactors; starters; busbarchambers) shall each be enumerated separately stating the rated capacity and the type. Connecting the cable- tails shall be deemed to be included with the items.

CONDUITS, TRUNKING AND TRAY

- Conduits

 S4

 (a) Conduits (measured over all conduit-boxes, conduit fittings, short running lengths and branches) shall be given in linear metres stating the type, the external size and the method of jointing. Conduits shall be deemed to be exposed unless described as concealed. Saddles or crampets shall be given in the description of the conduit stating the pattern. Bending cutting threading, jointing and providing all conduit-fillings (e.g. tees; elbows; bends; cover-plates; bushes; lock-nuts; stopping-plugs; reducing-bushes) shall be deemed to be included with the conduit items.
 - (b) Conduit-boxes shall be given in the description of the conduit stating the size and type of box. Special boxes (e.g. adaptable boxes; floor-trap boxes; boxes which are required to differ from those given in the description of the conduit) shall be enumerated as extra over the conduit in which they occur stating the type and size of box.
 - (c) Flexible conduits and extensible conduits (measured as fully extended) shall each be given separately in linear metres stating the type, the size and the terminations.
 - (d) Forming holes for conduit entries in special boxes, trunking, accessories, fillings, controlgear and equipment, and providing associated components (e.g. bushes; lock-nuts; nipples; additional boxes) shall be deemed to be included with the items in which they occur.
 - (e) Conduits embedded in floor screed and conduits embedded in concrete shall each be so described.
 - (a) Trunking (measured over all trunking-fillings, short running lengths and branches) shall be given in linear a metres stating the nominal size of the trunking, the number and the nominal size of any compartments and the method of jointing. Components for earthcontinuity shall be deemed to be included with the trunking items.
 - (b) Trunking-fitting (e.g. stop-ends; bands; tees; crosses; offsets; reducers) shall each be enumerated as extra over the trunking in which they occur. Culling and jointing trunking to such fittings shall be deemed to be included with the trunking.

68

Trunking

S5

		(c)	Forming openings in trunking for entries from equipment and control-gear (e.g. busbar-chambers; distribution-boards; isolator-switches; switch-fuses) shall be enumerated stating the size of the opening in the trunking and the thickness, type and size of any bushing material.
		(d)	Pin-racks for supporting cables in trunking shall be enumerated stating the type and the size.
Tray	S6	(a)	Tray for cables shall be given in linear metres stating the width, the method of jointing and the distance between the fixing centres.
		(b)	Stools shall be enumerated stating the size
		(c)	Tray-fittings (e.g. bends; tees; crosses; offsets) shall each be enumerated separately as extra over the tray in which they occur, Cutting and jointing tray to such fittings shall be deemed to be included with the tray.
			CABLES AND CONDUCTORS
Cables	S7	(a)	Cables in conduits, ducts or trunking and cables fixed to tray shall be measured as the net length of the conduit, duct, trunking or tray. Other cables shall be measured as laid (but without allowance for sag) between the boxes of equipment, control-gear, fittings, accessories and the like. The following allowance shall be made:-
			 i. 0.5 metres on each cable entering fitting and accessories ii. One metre on each cable entering equipment and control-gear
		(b)	Cables shall be given in linear metres stating the type and the size and method of installation and method of installation. Cables required to be colour-coded or otherwise marked for identification shall be so described. Classifications shall be as follows:-
			i. Drawn into conduits or ducts
			ii. Laid in or drawn into trunking
			iii. Laid in or drawn into trunking and laced into circuit groups
			iv. Fixed to surfaces
			v. Wrapped around pipework (e.g. trace heating).
			vi. Laid in trench
			vii. Fixed to insulators in overhead lines
			viii. Suspended from catenaries.
		(c)	The following work shall be deemed to be included with the cables:-
			i. Reading drawings and determining circuits
			ii. Skinning ends of cables to expose the conductors
			iii. Capping ends of cables (including the ends of cable drums or coils after cutting)
			iv. Providing draw-wires, draw-cables and the like for drawing or hoisting cables
			v. Swabbing and clearing foreign matter from conduits, ducts, trunking and tray.
		(d)	Cables drawn into old conduits, old ducts or old trunking shall each be so described. Removing and replacing old covers, old inspection lids and the like, shall be deemed to be included with the items.
Cable joints	S8	(a)	Cable-joints shall be enumerated stating the type and size of cable. Joint-boxes, sealing-boxes and the like shall be given in the description stating the type. Materials and heat for making the joint shall be deemed to be included with the item.
		(b)	Line-taps shall be enumerated stating the size and type of the cable. Shrouds shall be given in the description stating the type.
Cable supports	S9	(a)	Components for supporting cables (e.g. saddles, cleats, clips; changers; suspenders)

			shall be given in the description of the cables stating the type of component and the spacing along the cable.
		(b)	D-irons, insulators and the like shall each be enumerated separately stating the type of component and the size and kind of cable.
Cable-termination glands	S10	(a)	Cable termination glands shall be enumerated stating type and size of the cable and the type of gland. Providing insulating material, jointing material, lock-nuts, bushes and the like shall be deemed to be included with the items
		(b)	Conduit-boxes, adaptable boxes and the like (used with cable-termination glands) shall each be enumerated separately stating the type and the size. Cable connectorblocks shall be given in the description stating the type and the size. Connecting cable-tails to connector-blocks shall be deemed to be included with the items.
Cable sleeves	S11	(a)	Supplying cable-sleeves (e.g. short lengths of metal pipe or of stoneware conduit) for fixing by other trades through walls, floors, and ceilings shall be enumerated stating the size and the type of packing required
		(b)	Wall-plates, floor-plates and ceiling plates shall each be enumerated separately stating the size. Where plates are fitted to pipe sleeves they shall be given in the description of the sleeves stating whether to one or both ends.
Cable protection	S12	-	rotection such as slabs and metal sheeting and warning devices such as PVC marker tapes given in linear metres.
Earthing	S13	(a)	Tapes for earthing shall be given in linear metres stating the size. Saddles, cleats, clips, hold-fasts and the like shall be given in the description stating the type and the spacing along the conductor.
		(b)	Conductor connections and conductor junctions shall each be enumerated separately stating the type and size of the conductor. Tinning, sweating and providing any jointing materials, heat, holes, rivets, bolts, nuts, washers and clamps shall be deemed to be included with the items.
		(c)	Radius-bends (I.e. bends in the wide dimension of tape conductors) shall be enumerated as extra over the conductor in which they occur. Other bends shall be deemed to be included with the conductor items.
		(d)	Test-clamps shall be enumerated stating the type, the size and the method of connecting
		(e)	Earth-electrodes shall be enumerated stating the type and the size. Driving the electrodes into ground shall be given in the description. Connecting the electrodes to the conductors shall be deemed to be included with the items. Excavating pits for earth-electrodes shall be given in accordance with Section D hereof.
Lighting Conductors	S14	(a)	Lighting conductors shall be given in accordance with the rules for earthing conductors in Clause R12 hereof.
		(b)	Air termination points shall be enumerated stating the type, the size and the method of connecting
			FITTING AND ACCESSORIES
Lighting fittings	S15	(a)	Pendant fittings (e.g. plain flexible cord pendants; conduit pendants; cham pendants) shall be enumerated stating the length of the pendant drop in stages of 300 millimetres. Boxes, conduit-boxes, wood-blocks, moulded-pattresses, breakjoint rings, ceiling-roses, connector-blocks, dome-covers, back-plates, ball-andsocket back-plates, earth-continuity, flexible cords, conduit, chains, hooks, lamp-holders, swanneck bends and the like shall be given in the description stating the type and the size. Bushes, nipples, lock-nuts and connecting the cable-tails shall be deemed to be included with the items.
		(b)	Incandescent lighting fittings and fluorescent lighting fittings shall each be enumerated separately stating the type and the size. Boxes, conduit-boxes, woodblocks, moulded pattresses, break-joint rings, ceiling-roses, connector-blocks, flexible cords, earth-ontinuity, chokes, capacitors, starters and lampholders shall be given in the description stating the type and size. Bushes, nipples, lock-nuts, and connecting the cable-tails shall be deemed to be included with the items.
		(c)	Cold-cathode lighting fittings and connecting to the circuit wiring shall be given as a provisional or prime cost sum as Clause A7 hereof.

		Fixing lighting fittings provided by the employer shall be enumerated stating the type a the size. Accepting delivery, storing and handling the fittings and connecting the cabletails shall be deemed to be included with the items. Providing any additional material a internal wiring required shall be <i>given</i> in the description. Where an item fixing involves handling an ornamental or unusually expensive fitting particulars of the character and value shall be given in the description.	ınd
		 Lamps shall be enumerated stating the type, the wattage, the voltage, and the kind of cap. 	
		Lamp-locks shall be enumerated stating the type and the size	
		g) Shades shall be enumerated stating the type and the size	
Clocks, telephone, alarms, speakers and immersion-heaters	S16	Clocks, bells, geysers, stores, heaters, thermostats, starters, motors, stand-by equipmed battery charges control pannel, telephones, fire-alarms, burglar alarms, loud-speakers and the like shall each be enumerated separately stating the type and the capacity. Boxes, conduit-boxes, wood-blocks, mouldedpattresses, cover-plates and the like shall given in the description stating the type and the size. Connecting the cable-tails to the components shall be deemed to be included with the items.	l be
		Electric immersion-heaters and the like shall be <i>given</i> in accordance with Section Q hereof. Connections to immersion-heaters shall be enumerated stating the capacity are the method of wiring.	nd
Accessories	S17	ccessories (e.g. switches; sockets-outlets; switch-socket-outlets; clock-connector points; nermostats; telephone-outlet points; bell-pushes; signal-indicating units) shall be enumerated in angs stating the rated capacity and type of each accessory and the number of accessories in eac ang. Boxes, conduit boxes, wood blocks, mouldedpattresses, cover-plates, plug-tops and the like hall be given in the description stating the type and the size. Connecting the cable-tails to the ccessories shall be deemed to be included with the items.	:h
Marking positions	S18	Marking the positions of holes, mortices, chases and the like in the structure shall be given as tem for each installation. Where the nature of the work necessitates any of these to be forrularing construction, the relevant particulars shall be given.	
Identification positions	S19	Plates, discs and labels for the identification of plant, equipment, cables, switches and the like seach be enumerated separately. Charts giving the key thereto shall be enumerated.	hall
Loose keys, tools and spares	S20	coose keys, tools, spares and the like shall each be enumerated separately stating the type and quantity. Racks for holding tools and the like shall be enumerated stating the size.	
Electric meters	S21	electric meters shall be enumerated stating the capacity and the type. Connecting the cable-tails shall be deemed to be included with the items.	i
Connections to mains	S22	Connecting the ends of cables to public mains, making good public high ways and other work wh nay only be carried out by a public undertaking or local authority shall be given as a provisional curime cost sum as Clause A7 hereof.	
Temporary operation of the installation	S23	emporarily operating each electrical installation shall be given as an item stating any required qualifications of the attendant, the duration of the operating period in hours, the purpose (e.g. ighting; heating; drying the building; reducing the ambient humidity) and particulars of any specinsurance cover required by the employer. Providing current shall be given as a provisional or pricost sum as Clause A7 hereof.	
Disconnecting and refixing equipment	S24	Disconnecting, setting aside and refixing equipment (e.g. radiators; convectors) for the convenient of other trades shall be given as an item stating the relevant particulars.	nce
Plans of the installation	S25	Preparing plans or diagrams of the electrical installation as fitted shall be given as an item stating he kind of information required to be shown and the number of copies of each drawing required to be provided.	_
Testing the installations	S26	esting the installations shall be given as an item stating particulars of any special insurance co equired by the employer. Providing instruments, appliances, fuel, gas, water, electricity, light and attendance for the tests shall be deemed to be included with the item.	
		BUILDER'S WORK	
Builder's work generally	S27	Builder's work in connection with the electrical installations shall be grouped toget under an appropriate heading and, where required to be executed by the electrical shall be so described and hilled with the installation	

shall be so described and billed with the installation.

Cable trenches	S28	(a)	the nearest 25	e -trenches shall be given in linear metres stating the average depth to 0 millimetres. Grading bottoms, planking and strutting, back-filling, and disposing of surplus spoil shall be given in the description.
		(b)	Sand for beddi width and dep	ng cables in trenches shall be given in linear metres stating the average th of the sand.
		(c)	Cable-covers ir	n tenches shall be given in linear metres stating the type and the size.
Cable ducts and inspection chambers	S29			e ducts and inspection chambers for underground cables shall be given in for drainage in Section V hereof.
Bedding and pointing	S30			nponents or units of plant appliances, pointing and the like shall be ze thereof and the composition and mix of the bedding material.
Cutting and pinning	S31	_	and pinning ends of enumerated	of supports for equipment appliances, fittings, trunking, tray and the like
Cutting away and making good	S32	(a)	making good a or cables are co i. Ligh	res (i.e. structures in the course of construction) cutting away for and fter the electrician shall be enumerated as points stating whether conduits oncealed or exposed. Classification shall be as follows:-nting points stating the type and the size of the lighting fitting. Associated tch points shall be given in the description irrespective of number.
				ver points stating the type and the size of the power outlet. Associated tch points shall be given in the description irrespective of number.
				e alarms, signal points and bell points (grouped together). Associated push nts and the like shall be given in the description irrespective of number.
				ters, isolator-switches, switch-fuses, distribution-boards, busbar- chambers I the like (grouped together).
		(b)	In old structure follows:-	es, cutting away for and making good after the electrician shall be given as
			i.	Holes for conduits, cables, trunking, tray and the like shall be given in accordance with the rules in the appropriate section hereof.
			ii.	Mortices, sinkings and the like shall each be enumerated separately stating the size thereof and the nature of the structure.
			iii.	Lifting and replacing old chequer-plates and the like shall be given in linear metres.
			iv.	Lifting and replacing old floorboards (measured along the route of the cable or conduit) shall be given in linear metres stating the number of cables or conduits in groups of 3 (e.g. not exceeding 3 cables or conduits; over 3 but not exceeding 6 cables or conduits). No distinction conduits; over 3 but not exceeding 6 cables or conduits). No distinction shall be made between routes parallel to or at angle to the floorboards. Cutting floorboards and notching joists shall be deemed to be included with the items.
			v.	Cutting chases shall be given in linear metres stating the size of the cable, conduit or trunking and the nature of the structure
			vi.	Cutting out old plasterwork, old brickwork, old plain concrete, old reinforced concrete and the like not exceeding 300 millimetres in width and making good after shall each be given separately in linear metres
Pylons and poles	\$33	(a)	supporting cab	hut-posts, wall-brackets, pole-brackets, pole-stays and the like for oles shall each be enumerated separately stating the size, the method of nature of the structure.
		(b)	-	vating holes in ground for poles and stays shall be enumerated stating the ure of the filling (e.g. excavated material; concrete) and the treatment of

Excavating pits and forming concrete bases for pylons shall be given in accordance with

the rules in Section D and F hereof.

(d)	Catenaries shall be given in linear metres stating the type and the size. Eye-bolts,
	shackles and straining screws shall be given in the description stating the method of
	fixing.

Metal work	S34	Metalwork in connection with the electrical installation (e.g. framework for supporting plant,
		control-gear, equipment and the like: metal ladders and gantries for access to plant; metal duct-
		covers) shall be given in accordance with the rules in Section P hereof.

PROTECTION

Protection	S35	Where the work involves the use of mineral insulated copper-covered cable, protecting such cable
		shall be given as an additional Item stating the total length.

ELECTRONIC INSTALLATIONS

Electronic installation	
generally	

S36

Installations such as telecommunication, public address, closed circuit television, data transmission, access control, security, fire detection and building management systems shall be given in accordance with appropriate sections hereof

SECTION T FLOOR, WALL AND CEILING FINISHINGS The Unit of Billing shall be the Metre GENERALLY TO SECTION T

Floor, wall and ceiling finishings generally	T1	(a)	Work shall be grouped according to the kind of material and each group with its associated labours shall be given under an appropriate heading. For waterproofing floor finishings see Section J hereof.
		(b)	Work and labours on external surface shall be so described
		(c)	Work on labours executed overhand shall be so described
		(d)	Work and labour in repairs shall be so described and the preparation of existing surfaces to receive such work shall be given in the description.
		(e)	Work on existing surfaces shall be so described stating the thickness of any dubbing.
		(f)	Work to pattern or in more than one colour shall be so described stating the nature thereof. $ \\$
		(g)	Curved work, conical work and spherical work shall each be so described stating the radius. Elliptical work and other work curved to more than one radius shall be so described stating the radii. Curved labours shall be so described irrespective of the radius.
		(h)	Temporary rules, temporary supports to risers and the like, temporary screeds and templates shall be deemed to be included with the items.
La ette Catalita e	T2	(-)	IN-SITU FINISHINGS
In-situ finishings generally	T2	(a)	Particulars of the following shall be given:-
,			i. Kind of material, composition and mix
			ii. Thickness, which shall be deemed to be exclusive of keys, grooves and open joints in walling.
			iii. Numbers of coats. (Where none stated the number shall be deemed to be at the Contractor's option).
			 iv. Nature of surface treatment (e.g. steel trowelled; wood floated) v. Nature of base (e.g. concrete; brickwork; blockwork; metal lathing; screeded bed; screeded backing). Work on concrete, brickwork and blockwork may be grouped together provided the composition and mix of the finishing is the same in each case. vi. Preparatory work (e.g. hacking concrete) and any special treatment of base (e.g. grouting; applying bonding-agent). vii. Any special curing of finished work
		(b)	Work shall be measured the area in contact with the base
Floors and pavings	ТЗ	(a)	Floors and pavings to fall, cross-falls and slopes not exceeding 15 degrees from horizontal (grouped together) and to slopes over 15 degree from horizontal shall each be given separately in square metres. Intersections on work to cross-falls shall be deemed to be included with the items.
		(b)	Work laid in bays or panels shall be deemed to be included with the items.
		(c)	Work to floors laid in one operation with the base concrete shall be so described
		(d)	Work to floors in pattern shall be so described
		(e)	Work incorporating heating or similar equipment shall be so described stating the and pavings type and method of heating
Walls and ceilings	T4	(a)	Work to walls and ceilings shall each be given separately in square metres. Work to battering walls, to sloping ceilings, to sloping soffits of stairs and to flowing soffits of stairs shall each be so described.
		(b)	Work to ceilings and beams over 3.50 metres above floor (measured from ceiling level in both cases) shall each be so described stating the height in further stages of 1.50 metres.

- (c) Work behind wood skirtings and the like shall be dealt with as work to walls disregarding any grounds.
- (d) Work to sides of columns shall be included with work to walls
- (e) Work to sides and soffits of beams (grouped together) shall be so described
- (f) Projecting quoins, projecting plinths and the like shall each be so described. Plinth blocks shall be enumerated stating the size.

Staircases

T5

- Work to quarter-space and half space landings (grouped together) shall be given in square metres. Work to larger landings shall be classified as work to floors.
- (b) Work to treads, risers and edges of landings shall each be given separately in linear metres stating the width. Undercut risers shall be so described. Arrises, nosings and moulds shall be given in the description of the risers and edges. Ends and angles shall be deemed to be included.
- (c) Non-slip inserts shall be given in linear metres as extra over the work in which they occur.
- (d) Flush bands (or similar margins) of contrasting colour in finishings to treads, risers and landings shall be given in accordance with Clause T8 (b) hereof.
- (e) Work to wall-strings and open strings shall each be given separately in linear metres stating the extreme width. Ends and angles shall be deemed to be included with the items. Ramps and wreathed corners shall each be enumerated separately.
- (f) Work to kerb-strings shall be given in linear metres stating the girth. Raking kerbstrings shall be so described. Arrises shall be given in the description. Ends and angles shall be deemed to be included with the items. Ramps and wreathed corners shall be enumerated separately.

Labours on finishings

Т6

- (a) All joints and fair joints to abutments and boundaries shall be deemed to be included with the items.
- (b)

 i. Fair joints to flush edges of existing finishings (eg all kinds of existing in-situ, tile, slab, blocks, sheet and fibrous plaster-finishings) shall each be given separately in linear metres. Preparing edges of the existing finishings shall be deemed to be included with the joints.
 - ii. Coved joints shall be so described.
- (c) Internal angles shall be deemed to be included with the finishings in which they occur, except as otherwise provided in paragraph (e) of this Clause.
- (d) Fair edges, rounded edges, chamfered edges, arrises, chamfered external angles not exceeding 25 millimetres wide, rounded external angles not exceeding 25 millimetres radius, coved internal angles not exceeding 25 millimetres radius, intersections to groins and the like shall be deemed to be included with the items.
- (e) Quirks, beaded edges, moulded edges, chamfered external angles over 25 millimetres wide, rounded external angles over 25 millimeters radius and coved internal angles over 25 millimeters radius shall each be given separately in I inear metres stating the girth of the visible contour. Ends, angles and tersections shall be deemed to be included within the items.
- (f) Working finishings into recessed duct-covers and the like shall be given in linear metres as extra over the finishings in which they occur stating the width in stages of 100 millimetres. Working finishings into shaped insets, recessed manholecovers, mat-sinkings and the like shall each be enumerated separately as extra over the finishings in which they occur stating the size.
- (g) Making good around steel joists, channels, angles, tees, pipes, tubes, bars, cables, conduits, ducting, trunking, brackets, newels, WC pedestals, floor-springs, ventilators, soot-doors and the like shall be deemed to be included with the finishings items.
- (h) Dishing around gullies, outlets and the like (grouped together) shall be enumerated irrespective of size.

		(1)	Mortices, sinkings and the like shall each be enumerated separately stating the size or purpose.
		(k)	All cuttings on mosaic work shall be deemed to be included with the items.
Dividing strips	Т7	_	strips in finishings shall be given in linear metres stating the size. Ends, angles and ions shall be deemed to be included with the items.
Skirtings bands and margins	Т8	(a)	Skirtings shall be given in linear metres stating the height on face. Raking skirtings and vertical skirtings shall each be so described. Fair edges, rounded edges, beaded edges, moulded edges and coved junctions with paving shall be given in the description. Ends, angles and ramps shall be deemed to be included with the items. Flush skirting formed in the same material as the wall finishing and having a-vee or beaded top shall be dealt with in accordance with this sub-clause. Skirtings stepped over treads and risers of stairs shall be given separately.
		(b)	Flush, raised or sunk bands (or similar margins) of contrasting colour in floor or wall finishings shall each be given separately in linear metres as extra over the finishings in which they occur stating the width in stages of 100 millimetres. Raking members and vertical members shall each be so described. Ends, angles, intersections and ramps shall be deemed to be included with the items.
Kerbs	Т9	kerbs sha	kerbs shall be given in linear metres stating the girth on face. Raking kerbs and vertical all each be so described. Arrises, rounded edges and coves shall be given in the description. gles and inter-sections shall be deemed to be included with the items.
Channels	T10	(a)	Working finishings into shallow channels shall be given in linear-metres as extra over the finishings in which they occur stating the girth on face. Channels to falls shall be so described. Arrises shall be given in the description. Ends, angles and intersections shall be deemed to be included with the items.
		(b)	Linings to channels shall be given in linear metres stating the girth on face. Channels to falls shall be so described. Arrises and coves shall be given in the description. Ends, angles and intersections shall be deemed to be included with the items.
Mouldings and cornices	T11	(a)	Architraves, mouldings, ceiling-ribs and cornices (measured on face of wall or beam) shall each be given separately in linear metres stating the girth of the visible contour. Undercut mouldings, raking members and vertical members shall each be so described. Ends, angles and intersections shall be deemed to be included with the items.
		(b)	Cornices with bracketing shall be so described
		(c)	Cornices with flat or weathered tops shall be so described. The width of the top shall be deemed to be part of the visible contour for the purpose of sub-clause (a) of this Clause.
		(d)	Enrichments (i.e., regularly recurring features) shall be given in the description of mouldings. Ornaments (i.e., irregularly occurring features applied where required) shall be enumerated stating the size and character. Undercut enrichments and undercut ornaments shall each be so described.
Flush, raised or sunk panels	T12		sed or sunk panels of contrasting colour (or of different material) in finishings shall each be ted separately as extra over the finishings in which they occur stating the size and shape.
Metal beads	T13		gle-beads, screed-beads and casing-beads in plasterwork shall each be given separately in tres stating the method of fixing. Working plasterwork to the beads shall be included with
Ornaments	T14		ts cast in situ, air gratings and the like shall be enmanated and including description of the ize and method used.
Metal lathing	T15		thing and the like to receive in-situ finishes shall be given in square metres and the ion shall be deemed to include taps and holes.
Tile, slab or block finishings generally	T16	(a)	TILE, SLAB OR BLOCK FINISHINGS Particulars of the following shall be given:-
			 Kind of tile, slab or block units (e.g. precast concrete; precast terrazzo; precast mosaic; precast asphalt; clayware; brick; natural stone; cast stone; slate; marble; glass; plastics; composition; woodblocks; metal linoleum; cork;

rubber).

- ii. Thickness and size of tile, slab or block units
- iii. Shape of units where other than rectangular
- iv. Nature of surfaces finish (e.g. glazed, rubbed, polished)
- v. Bedding or other method of fixing units and any additional security safeguards required (e.g. screws; screws and rosettes, clips; anchors).
- vi. Layout of joints (e.g. breaking joint; draughtboard pattern; basket pattern; herringbone pattern).
- vii. Grouting, pointing or other finish to joints
- viii. Nature of base (e.g. wood; screeded bed; concrete, brickwork and blockwork grouped together).
- ix. Method of fixing
- (b) Temporary moulds for precast tile, slab and block units shall be deemed to be included with the items.
- (c) Work shall be measured as executed
- (d) Work laid to patterns shall be so described stating the type of pattern

Floors pavements walls, etc

(a)

- Work to floors, pavements, walls, ceilings and staircases shall be given in accordance with the rules for in-situ finishings in Clause n, T3, T4 and T5 hereof, except that glass coverings having any of the labours mentioned in Clause T16 paragraphs (d) (e) (g) (h) (j) (k) and (n) shall be enumerated as units stating the size.
- (b) Bent glass coverings shall be enumerated as units stating the size, the radius or girth of the bend and whether bent in the long or the short dimension or both.

Labour on finishings

T18

T17

- (a) Square cutting shall be deemed to be included with the items
- (b) Raking cutting and curved cutting shall each be given separately in linear metres except where occurring within a pattern. In the case of work laid to diagonal patterns, straight perimeter cutting and curved perimeter cutting shall each be given separately in linear metres except as otherwise provided in sub-clause (c) of this Clause.
- (c) Plain block borders shall be given in the description of block finishings. Raking cutting and curved cutting on block finishings laid to a diagonal pattern within a plain border shall be deemed to be included with such finishings.
- (d) Fair edges, rebated edges, rounded edges, chamfered edges, splayed edges, bevelled edges and the like shall each be given separately in linear metres. Ends, angles and intersections shall be deemed to be included with the items, except that internal angles worked on the solid shall be enumerated.
- (e) Moulded edges, grooves, flutes and the like shall each be given separately in linear metres. Ends, angles and intersections shall be deemed to be included with the items.
- (f) Cutting and fitting into recessed duct-covers and the like shall each be given separately in linear metres as extra over the finishings in which they occur stating the width. Cutting and fitting into shaped insets, recessed manhole-covers, mat-sinkings and the like shall each be enumerated separately as extra over the finishings in which they occur stating the size. Jointing which is required to line up with adjoining work shall be deemed to be included.
- (g) Cutting and fitling around steel joists, channels, angles, tees and the like (grouped together) shall be enumerated stating the size.
- (h) Cutting and fitting around pipes, tubes, bars, cables, conduits and the like members (grouped together) shall be enumerated stating the size of the member in stages as Clause A4 hereof.
- (i) Cutting and fitting around ducting, trunking, brackets, newels, WC pedestals, floor-springs, ventilators, soot-doors and the like (grouped together) shall be enumerated stating the size of the member.
- Mortices, sinkings, notches, rounded corners and the like shall each b e enumerated separately stating the size, girth or purpose.
- (k) Dishing around gullies, outlets and the like (grouped together) shall be enumerated irrespective of size.

(1) Mortices, sinkings, notches, rounded corners and the like shall each be enumerated separately stating the size, girth or purpose. (m) Forming access panels shall be enumerated as extra over the finishings in which they occur stating the size and method of securing. Any labours which are on glass coverings shall be given in the description of the glass (n) units. The width of bevels shall be stated. Holes in glass units shall be given in the description and countersunk shall be so described. Special edge and corner finishings shall be given in linear metres as extra over the (o) finish in which they occur. Dividing strips in finishings shall be given in linear metres stating the size. Ends, angles and Dividing strips T19 intersections shall be deemed to be included with the items. Skirtings, bands, T20 (a) Skirtings shall be given in linear metres stating the extreme height. Raking skirtings and margins and sills vertical skirtings shall each be so described. Rounded edges, moulded edges and coved junctions with paving shall be given in the description. In the case of stone, slate or marble coved skirtings the thickness stated shall include the projection of the cove. Ends, angles and ramps shall be deemed to be included in the items. (b) Flush, raised or sunk bands (or similar margins) of contrasting colour in floor or wall finishings shall each be given separately in linear metres as extra over the finishings in which they occur stating the width. Raking members and vertical members shall each be so described. Ends, angles and intersections shall be deemed to be included with the Sills and the like (grouped together) shall be given in linear metres stating the extreme (c) width and thickness. Rounded edges and moulded edges shall be given in the description. Ends and angles shall be deemed to be included with the items. Kerbs T21 Work to kerbs shall be given in linear metres stating the girth on face. Raking kerbs and (a) vertical kerbs shall each be so described. Rounded edges and covers shall be given in the description. Angles and intersections shall be deemed to be included with the items (b) Work to ends of kerbs shall be enumerated stating the size. Rounded edges and coves shall be given in the description. Channels T22 Block and scum channels and linings to channels shall each be given separately in linear metres stating the width and the average depth. Channels to falls shall be so described. Rounded edges shall be given in the description. Ends, angles, intersections and outlets shall each be enumerated separately. Covers and mouldings Special tiles and special slabs to form coved internal angles of any radius, rounded external angles T23 of greater radius than the thickness of the finishing, architraves, mouldings, ceiling-ribs, cornices and the like shall each be given separately in linear metres stating the extreme size, Raking members and vertical members shall each be so described. Ends, angles and intersections shall each be enumerated separately. Flush, raised or sunk panels of contrasting colour (or of different or materials) in finishings shall each Flush, raised sunk T24 panels be enumerated separately as extra over the finishings in which they occur stating the size and shape. **PLAIN SHEET FINISHINGS** Plain sheet finishings T25 Particulars of the following shall be given:-(a) Kind of sheeting (e.g. plywood; chipboard; plasterboard; fibreboard; wallboard; asbestos-cement; plastic; linoleum; cork; rubber; steel; lead; zinc; aluminium: copper) ii. Thickness and quality of sheeting iii. Method of fixing and treating of joints iv. Nature of base (b) Work shall be measured as executed Laps and seams shall be given in the description stating the extent of lap and the type of (c) seam. No allowance in measurement shall be made for these and this shall be stated. Floor finishings T26 Finishings to floors shall be given in accordance with the rules for in-situ finishings in Clause T3 hereof.

Wall and ceiling finishings	T27	(a)	Finishings to walls and ceilings shall each be given separately in accordance with the rules for in-situ finishings in Clause T4 hereof.
		(b)	Cover-strips over joints of finishings shall be given in liner metres stating the size. Ends, angles and intersections shall be deemed to be included with the items.
Labours on finishings	T28	(a)	Square cutting shall be demed to be included with the items
		(b)	Raking cutting and curved cutting shall each be given separately in linear metres except where occurring within a pattern.
		(c)	Rounded external angles and coved internal angles shall each be given separately in linear metres stating the girth of the visible contour.
		(d)	Cutting and fitting around pipes, tubes, bars, cables, conduits and the like members (grouped together) shall be enumerated stating the size in stages as Clause A4.
		(e)	Cutting notching and fitting around ducting, trunking, brackets, newels, WC pedestals, floor-springs, ventilators, and the like (grouped together) shall be enumerated stating the size of the member.
		(f)	Cutting around profiles of steps and the like shall be given in linear metres
		(g)	Forming openings of all sizes shall be enumerated stating the size.
		(h)	Forming access panels shall be enumerated as extra over the finishings in which they occur stating the size and the method of securing
Beds and backings	T29	(a)	BEDS AND BACKINGS Particulars of the following shall be given:-
generally	123	(a)	 i. Composition and mix ii. Thickness which shall be deemed to be exclusive of keys, grooves, open joints in walling iii. Number of coats if more than one iv. Nature of base as Clause T2 (b) (v) hereof v. Preparatory work (e.g. hacking) and any special treatment of base (e.g. grouting, applying bonding agent).
		(b)	Beds and backings shall be measured the area in contact with the base
		(c)	Reinforced beds and reinforced backings shall be so described
Beds and backings for floor, wall, ceiling and roof finishes	Т30	(a)	Screeds, beds and backing for floor, wall, ceiling and roof finishings shall be given in accordance with the rules for in-situ finishings in Clause T3 and T4 hereof stating the type of finish and the covering which they are to ceiling and receive. All labours mentioned in Clause T6 hereof shall be deemed to roof finishings be included with the items
		(b)	Triangular and coved internal angle fillets at edges of screeds and beds shall each be given separately in linear metres stating the size.
		(c)	Forming shallow channels in beds shall be given in liner metres as extra over the beds in which they occur stating the girth on face. Channels to falls shall be so described. Arrises, rounded edges, coves, ends, angles, intersections, outlets and the like shall be deemed to be included with the items.
		(d)	Linings to channels shall be given in linear metres stating the girth on face. Channels to falls shall be so described. Arrises, rounded edges, coves, angles, intersections, outlets and the like shall be deemed to be included with the items
Lathing and baseboarding generally	T31	(a)	LATHING AND BASEBOARDING Particulars of the following shall be given:-
			 i. Type and thickness of baseboarding and treatment of joints ii. Type, gauge and mesh of metal lathing and extend of the laps iii. Method of fixing
		(b)	Lathing and baseboarding shall be measured the area covered

Baseboarding	T32	of the fin	ording (e.g. plaster-boarding) for wall and ceiling finishings shall be given in the description hishing applied to them. Raking cutting, curved cutting and notching shall be deemed to be with the items.
Metal lathing	Т33	(a)	Metal lathing over 300 millimetres wide for floor wall and ceiling finishings shall each be given separately in square metres. Such work not exceeding 300 millimetres wide (except where caused by voids) shall be given in linear metres stating the width in stages of 100 millimetres, and where caused by voids shall be included with the work given in square metres
		(b)	Raking cutting and curved cutting shall each be given separately in linear metres.
		(c)	Forming openings and cutting metal lathing around pilasters, columns, steel sections, pipes, tubes, conduits, bars, cables, standards, ducting trunking, brackets, floor springs, ventilators and the like shall be deemed to be included with the items.
		(d)	Steel runners shall be given in linear metres stating the size and the method of fixing. Hangers shall be enumerated stating the size, the length and the method of fixing.
	:	SUSPENDED	PLAIN SHEET LININGS WITH SUPPORTING METAL WORK
Suspended plain sheet linings generally	T34	(a)	Particulars of the following shall be given:-
illings generally			 i. Kind, thickness and quality of sheeting ii. Size and spacing of supporting metal work (e.g. metal sections; brackets; hangers). iii. Length of hangers iv. Nature of structure to which the brackets and hangers are fixed and where to steel framing, the size and spacing of the members of such framing. v. Method of securing brackets and hangers to structure
		(b)	Linings shall be measured overall on the exposed faces and shall be deemed to include all necessary supporting metalwork and accessories for fixing.
Wall, ceiling and roof linings	T35	(a)	Linings over 300 millimetres wide shall be given in square metres. Those not exceeding 300 millimetres wide (except where caused by voids) shall be given in linear metres stating the width in stages of 100 millimetres, and where caused by voids shall be included with the work given in square metres
		(b)	Linings of upstands of ventilators, roof-lights and the like shall each be so described.
		(c)	Linings under roofs shall be so described stating whether over or under the purlins and the nature of the roof coverings.
		(d)	Linings over 3.50 metres from floor shall be so described stating the height in further stages of 1.50 metres.
		(e)	Square cutting shall be deemed to be included with the items.
		(f)	Raking cutting and curved cutting shall each be given separately in linear, metres except where occurring within a pattern.
		(g)	Cutting around profiles of steps and the like shall be given separately in linear metres.
		(h)	Forming openings of all sizes shall be enumerated stating the size.
		(i)	Forming access panels shall be enumerated as extra over the linings in which they occur stating the size and the method of securing.
Metal trim	T36		m at edges of linings shall be given in linear metres stating the size and method of fixing. gles and intersections shall be deemed to be included with the items.
			SELF-FINISHED PARTITIONS
Self-finished partitions	T37		hed partitions (e.g., precast terrazzo; precast mosaic) shall be given in accordance with the precast concrete units in Section F hereof.

<u>SECTION U</u> GLAZING ne Unit of Billing shall be the Meti

			The Unit of Billing shall be the Metre GENERALLY TO SECTION U
Glazing generally	U1	(a)	Work shall be grouped according to the kind and quality of glass and each group with its
,			associate labours shall be described in accordance with the usual trade terms
		(b)	Templates shall be deemed to be included with the items
		(c)	Materials resembling glass shall be given in accordance with the rules for glass
			GLASS IN OPENINGS
Panes general	U2	(a)	Particulars of the following shall be given:-
			 Kind, quality, type, thickness and size (or substance) of glass. Thickness shall be deemed to be nominal unless described as exact.
			ii. Kind and type of glazing compound.
			iii. Method of glazing (e.g. with compound and springs; with wood beads or
			mouldings; with metal beads or mouldings; with metal clips or angle pieces).
			iv. Method of securing beads or mouldings (e.g. with brads, with screws).
			v. Whether panes in beads or mouldings are bedded in compound.vi. Nature of sash or other surround (e.g. wood; metal; stone).
			vii. Method of glazing and the material of the frames to receive the glass.
		(b)	Panes of irregular shape shall be measured as the smallest rectangular area from which such irregular shape can be obtained and shall be so described.
		(c)	Panes in double-glazed lights not hermetically sealed (each pane measured separately) shall be so described.
		(d)	Panes of Georgian wired polished plate and panes of patterned or decorated glass which are required to align one or both ways (within the limits of manufacture) between adjacent panes shall be so described.
Glass generally	U3	generally	ss, rolled or cast glass, plate float or toughened glass shall each be given separately in square metres stating the thickness of the pane. The size of other panes shall be as follows:-
			 i. Not exceeding 0.10 square metres stating the number of panes ii. Over 0.10 but not exceeding 0.50 square metres
			iii. Over 0.50 and continuing in further stages of 0.50 square metres
Labours on glass panes	U4	(a)	Raking cutting shall be deemed to be included with the items.
		(b)	Curved cutting shall be given in linear metres.
		(c)	Blackened edges to panes shall be given in the description of the items.
		(d)	Ground and polished edges and bevelled edges shall each be given separately in linear metres stating the width of the bevel. Work on curved or on bent panes shall be so described. Internal mitres, scallops and other shapings shall be enumerated separately. External mitres shall be deemed to be included with the items.
		(e)	Grinding, sandblasting and embossing (measured over the whole area of the pane) shall each be given separately in square metres stating whether the pane is wholly or partly obscured. For embossing, the type of acid work shall be stated. For design work, a full description of the design stating the type of acid work shall be given, even if in plain lines. Where one or more dimensions of the pane does not exceed 300 millimetres, the size of the pane shall be stated.
Drilled panes	U5	-	anes shall be enumerated stating the size of the pane and the diameter and number of the puntersunk holes shall be so described.
Bent panes	U6	-	es shall be enumerated stating the size of the pane, the radius or girth of the bend and bent in the long or the short dimension or both.
Brilliant cut panes	U7		cut panes and panes with other decorative work shall each cut panes be enumerated ly stating the nature of the decoration and the size of the pane.

Silvered panes	U8	Silvered panes shall be enumerated stating the size of the pane. Coloured silvering and gold silvering shall each be so described. Venetian treatments and protective coatings shall be given in the description.
Glass jointing	U9	Glazing gaskets, cover beading and sealing of joints in panes with silicone and the like shall be given separately in metres. Description of gasket and cover beading shall be given. Moulded coshers to gaskets shall be given as extra over.
Hermetically sealed units	U10	Double or multiple factory-made hermetically-sealed units shall sealed units be enumerated stating the size, type and altitude above sea-level at which they are to be fixed.
Glass louvres	U11	Glass louvres shall be enumerated stating the size; alternatively they may be given in linear metres stating the width and the number. Labours to edges shall be given in the description.
Bedding in strip material	U12	Bedding edges of panes in strips or channels shall be given in linear metres stating the kind of material.
Hacking out	U13	Hacking out old glass and preparing rebates (measured the perimeter of the pane) shall be given in linear metres.
Glass to tops, shelves and doors	U14	Gloss shall be enumerated stating the size of, thickness and method affixing and descriptions shall include labours to edges, holes finger grips, screws, clips, etc.
Lights generally	U15	LEADED LIGHTS & COPPER LIGHTS IN OPENINGS (a) Particulars in accordance with clause U2 (a) hereof shall e given with the addition of the following:-
		 Type, section and width of panes stating whether nominal or finished width and whether reinforced.
		 ii. Shape of panes (e.g. rectangular; diamond; ornamental) iii. Average size of panes iv. Method of fixing
		(b) Lights shall be measured overall as executed. Opening lights ranging with fixed lights shall be measured the same size as the fixed lights. Lights of irregular shape shall be measured as the smallest rectangular area from which such irregular shape can be obtained and shall be so described.
		(c) Lights which are required to align one or both ways between adjacent lights shall be so described.
		(d) Fire-resisting copper lights shall be so described stating the Authority whose requirements are to be satisfied.
Light in openings	U16	(a) Leaded lights and copper lights over 300 millimetres in both dimensions shall each be given separately in square metres without distinction as to the size. Those not exceeding 300 millimetres in one direction shall be given in linear metres stating the width. Those not exceeding 300 millimetres in both dimensions shall be enumerated stating the size
Lights in openings	U16	(b) Lights with shaped heads, trefoils, quatre-foils and the like below the springing shall be included with those given in accordance with paragraph (a) of this clause. The shaped heads above the springing shall be given in square metres stating the shape and the number.
Labours on glass in lights	U17	Raking cutting and curved cutting on glass in lights shall be deemed to be included to be included with the items.
Bent lights	U18	Bent lights shall be enumerated stating the size of the light, the radius or girth of the bend and whether bent in the long or the short dimension or both.
Saddle bars	U19	Saddle bars shall be given in linear metres stating the material, the size of the bar and the method of securing the light.
Mirror	U20	Mirrors shall be enumerated stating the size and the method of fixing. Coloured mirrors shall be so described. Protective coatings, holes, countersunk holes, brilliant cutting, polished edges, bevelled edges, rounded corners and the like shall be given in the description.
Patent Glazing	U21	PATENT GLAZING (a) Patent glazing (measured over bars) shall be given in square metres stating the length
		and spacing of the glazing bars, the nature of the beading (e.g. timber; metal; concrete)

and the span between bearings. Description shall include cleats, bolts, plates and other incidentals. Classification shall be as follows:-

- i. To roof
- ii. To skylights
- iii. To lantern lights stating the type (e.g. lean-to; gable-ended; hipped; domed; barrel).
- iv. To vertical surfaces
- (b) Opening portions of patent glazing shall be enumerated as extra over the work in which they occur stating the size. Opening gear shall be given in the description stating the type and the method of fixing.

Labours on patent glazing	U22	Raking cutting and curved cutting shall each be given separately in linear metres
		DOME-LIGHTS
Dome-lights	U23	Done-lights shall be enumerated stating the overall size, the shape and the method of fixing

SECTION V PAINTING AND DECORATING The Unit of Billing shall be the Metre GENERALLY TO SECTION V

Painting and decorating generally	V1	(a)	Work shall be grouped as follows and each group shall be given under an appropriate heading: i. Internal work ii. External work
		(b)	Work required to be executed on members before they are fixed shall be so described.
		(c)	Material required to be applied by a particular method shall be so described stating the method.
		(d)	Work shall be measured the area covered and appropriate allowances made (unless otherwise provided herein) for the extra girth of edges, mouldings, panels, sinkings, corrugations, flutings, carvings, enrichments and the like.
Painting and similar	V2	(a)	PAINTING AND SIMILAR WORK Particulars of the following shall be given:-
work generally			 i. Kind and quality of materials ii. Nature of work (e.g., limewhiting, distempering, painting; staining; graining; varnishing) iii. Nature of the base on which is work executed iv. Preparatory work (e.g., rubbing down; burning off; stripping old paper or other decorations; cutting out and repairing cracks; knotting; stopping; spotpriming, applying strips of scrim). v. Number of priming of sealing coats vi. Number of undercoats vii. Number of finishing coats stating the surface finish
		(b)	Rubbing down between coats with glasspaper shall be deemed to be included with the items. Particulars of any other abrasive required to be used shall be given.
		(c)	Moulding and bands picked out in colours different from the surrounding work shall be so described.
		(d)	Separate items shall be given for paintwork on different components except where they can be suitably grouped as general surfaces.
On general surfaces	V3	(a)	Work on surfaces over 300 millimetres girth shall be given in square metres. Work on isolated surfaces not exceeding 300 millimetres girth shall be given in linear metres stating the girth in stages of 100 millimetres. Work on isolated surfaces not exceeding 0.10 square metre shall be enumerated irrespective of size. No deduction shall be made for openings, wants, etc., not exceeding 0.10 m2. Classification of work shall be as follows:-
			 i. On walls ii. On ceilings iii. On floors iv. On other general surfaces (grouped together) except those separately dealt with herein
		(b)	Work on ceilings (having no applied finish other than the painting) requiring scaffolding over 3.50 metres shall be so described stating the height in further stages of 1.50 metres.
		(c)	Work on friezes shall be added to similar work on abutting walls or ceilings. Work on piers and columns shall be added to similar work on walls. Work on beams and cornices shall be added to similar work on ceilings.
		(d)	Work on corrugated surfaces, fluted surfaces and carved surfaces shall each be so described (measured overall regardless of actual girth).
		(e)	Work on surfaces with apertures or indentations (e.g. honeycomb walling; plain or ornamental concrete grilles and the like) shall each be so described and measured overall regardless of voids or actual girth.
		(f)	Work in multi-colours (i) on walls (ii) on ceilings and beams, and (iii) on cornices shall

			each be so described. The terms multi colours shall only be used in connection with work on such surfaces and shall mean the application in one room of more than one colour on either the walls, or the ceilings, beams and cornices, except that where a frieze is finished in the same colour as the ceiling and the remainder of the wall is finished in a different colour, this shall not be regarded as work in multi-colours
		(g)	All cutting in shall be deemed to be included with the items.
		(h)	Carved rosettes, modillions, centre flowers and the like (grouped together) picked out in colour different from the surrounding work shall be enumerated stating the size.
On wood frames, wooden windows and glazed wood doors	V4	(a)	Work on wood frames, linings, architraves, mullions and transomes (measured each side) shall be given in accordance with Clause V3 hereof.
		(b)	Work on wood sashes, wood casements and glazed wood doors (grouped together and measured on each side over glass) shall be given in square metres.
		(c)	Work on edges of opening casements and additional painting (caused by opening lights) on the surrounding frame shall be deemed to be included with the items.
		(d)	Work on glazing beads, butts and fastenings shall be deemed to be included with the items to which they are attached.
On metal windows and glazed metal doors	V5	(a)	Work on metal windows and glazed metal doors (grouped together and measured on each side over permanent ventilators, frames, mullions, transomes and glass) shall be given in square metres.
		(b)	Work on edges of opening casements and additional painting (caused by opening lights) on the surrounding frame shall be deemed to be included with the item.
		(c)	Work on metal sub-sills, hopper-cheeks and the like shall be measured and added to similar work on metal windows.
		(d)	Work on glazing beads, butts and fastenings shall be deemed to be included with the items to which they are attached.
On structural steelwork	V6	lattice ste	structural steelwork shall be given in square metres. Work on members of roof trusses, elwork and the like (grouped together) shall be so described. Work on hookbolts, clips and hall be deemed to be included with the purlins, rails and the like with which they are d.
On grilles, balustrades, railings and mesh	V7	(a)	Work on ornamental grilles, ornamental balustrades, ornamental railings, ornamental gates and the like (measured overall regardless of voids) shall each be given separately in square metres. Each side shall be measured and this shall be stated.
		(b)	Work on mesh, chain-link, expanded metal, welded mesh, and the like (measured overall) shall each be given separately in square metres. Each side shall be measured and this shall be stated
On gutters	V8	(a)	Work over 300 millimetres girth on valley-gutters, parapet gutters and the like (grouped together) shall be given in square metres. Work not exceeding 300 millimetres girth on such members shall be given in linear metres stating the girth in stages of 100 millimetres.
		(b)	Work (of any girth) on eaves-gutters shall be given in linear metres stating the girth in stages of 100 millimetres (or the size of the gutter). Work on ordinary brackets shall be deemed to be included with the work on eaves-gutters but work on ornamental brackets shall be enumerated.
On Pipes	V9	(a)	Work on small pipes shall be given in linear metres
		(b)	Work on large pipes shall be given in linear metres
		(c)	Work on extra large pipes shall be given in square metres (measured externally) or may be given in linear metres stating the diameter.
		(d)	Work on lagged pipe shall be given in square metres (measured externally)
		(e)	Work on pipes in different colours for identification purposes shall be so described

On bars, cables, conduits, straps and ducting	V10	Work over 300 millimetres girth on bars, cables, conduits, standards, straps, ducting, trunking, tray and the like (grouped together) shall be given in square metres. Work not exceeding 300 millimetres girth on such members (grouped together) shall be given in linear metres stating the girth in stages of 100 millimetres. Work on conduit boxes and the like shall be deemed to be included with the work on conduits.		
On Sundries	V11	(a)	Work on saddles, pipehooks, holderbats and the like shall be deemed to be included with the work on pipes, tubes and conduits, but work on other components for fixing (e.g. straps and hangers) shall be given separately.	
		(b)	Work on ventilating gratings, soot-doors, flushing-cisterns, rainwater- heads, brackets, strap-hinges and the like shall each be enumerated separately irrespective of size.	
			POLISHING	
Polishing	V12	(a)	Particulars of the following shall be given:-	
			 i. Kind and quality of materials ii. Type of polish (e.g. French polish; wax polish) iii. Nature of base on which work is executed iv. Preparatory work on base (e.g. staining, fuming, bodying in; stopping; rubbing down). 	
		(b)	Polishing shall be given in accordance with the rules of painting	
Sign writing	V13	separate	SIGNWRITING r numerals, stops, direction-indicators and the like shall each be enumerated ly stating the style and height of the letters or numerals and the number of coats. Is shed with gold leaf shall be so described.	

SECTION W EXTERNAL DRAINAGE AND WATER RETICULATION The Unit of Billing shall be the Metre GENERALLY TO SECTION W

External Drainage and water reticulation	W1	Site works and services shall be grouped as follows and each group shall be given under an appropriate heading:		
		(a)	External drainage	
		(b)	Water reticulation	
Drainage generally	W2	(a)	EXTERNAL DRAINAGE Any information available concerning the nature of the ground and strata and particulars of any trial holes or trial bores shall be given.	
		(b)	Work beyond the boundary of the site shall be so described	
Pipe trenches	W3	(a)	WORK IN ALL TRADES Excavating pipe trenches shall be given in linear metres stating the starting level if other than the existing ground level, the depth-range in successive steps of 1.50 metres (e.g. not exceeding 1.50 metres total depth; between 1.50 metres and 3.00 metres total depth) and the average depth with the depth-range to the nearest 250 millimetres. Excavating curved trenches shall be so described. The internal diameter of the pipe to be received shall be stated in each case, except that trenches to receive pipes not exceeding 150 millimeters in diameter may be grouped together and be so described. Grading bottoms, planking strutting, filling in compacting and disposing of surplus spoil shall be deemed to be included with the items.	
		(b)	Excavating trenches in running silt or running sand (grouped together) shall be given in cubic metres as extra over all kinds of trenches irrespective of depth.	
		(c)	Excavating trenches in rock (as defined in Clause D5 (d) hereof) shall be so described or may be given in cubic metres as extra over all kinds of trenches for breaking up rock irrespective of depth. When given in cubic metres the maximum width to be measured shall be stated.	
		(d)	Breaking up concrete, reinforced concrete, brickwork and the like met with in excavation shall each be given separately in cubic metres as extra over all kinds of trenches irrespective of depth.	
		(e)	Breaking up surface concrete, reinforced surface concrete, brick paving ,tarmacadam and the like on the surface of the ground shall each be given separately in linear metres as extra over all kinds of trenches irrespective of depth	
		(f)	Disposal of water shall be given in accordance with clause, D18 hereof.	
Beds benching and coverings	W4	Concrete beds, benchings and coverings shall each be given separately in linear metres stating the mix and size of the concrete and the internal diameter of the pipe. Formwork shall be given in the description.		
Pipes	W5	(a)	Pipes of any material (measured over all pipe-fittings) shall be given in linear metres stating the kind of material, the quality of pipe, the internal diameter and the method of jointing.	
		(b)	Pipe fittings (e.g. bends, junctions, diminishing pipes) shall each be enumerated separately as extra over the pipes in which they occur. Cutting and jointing pipes to such fittings shall be deemed to be included with the items	
		(c)	Suspended pipes shall be so described and the supports enumerated separately	
		(d)	Vertical pipes shall be so described	
Accessories	W6	enumerat of each in	es (e.g. gullies; traps; inspection shoes; fresh air inlets; non return flaps) shall each be sed separately stating the kind, quality and size of the accessory and the internal diameter let and outlet. Jointing pipes to such ae5cessories, bedding in concrete and providing sealing plates and the like shall be given in the description of the accessories.	
Open surface water channels and drains	W7	Open surface water channels and drains shall be given in linear metres and fully described. Excavation and formwork shall be given in the description. Angles ends and intersections shall be deemed to be included with the items.		

Manholes soakaways, cesspits, septic tanks, sewerage pods	W8	(a)	Inspection chambers, manholes, soakaways and the like (grouped together) shall be given in detail under an appropriate heading stating the number of each type of unit.	
		(b)	Cesspits, septic tanks, sewerage pods and the like for the treatment and disposal of sewage shall each be given separately in detail under an appropriate heading stating the number of units.	
		(c)	Excavation, concrete work, walling and other work shall be given in accordance with the rules in appropriate Section hereof.	
		(d)	Building in ends of pipes shall be enumerated stating the internal diameter of the pipe. Cutting pipes shall be deemed to be included with the items.	
		(e)	Channels, concrete benchings, foot-irons, covers and intercepting traps shall each be enumerated separately stating the type, the quality, the size and the method of bedding or fixing.	
		(f)	Work in existing manholes, cesspits, septic tanks sewerage pods and shall each be so described.	
Connections to sewers	W9		ng ends of drains to public highways and any other work which may only be carried out by uthority shall be given as a provisional or prime cost sum as Clause A7 hereof.	
Testing drains	W10	Testing t	he drainage system shall be given as an item stating the method of testing	
			WATER RETICULATION	
Water reticulation generally	W11	(a)	Work shall be grouped as follows and each group shall be given under an appropriate heading	
			i. Cold water supply and storageii. Irrigation systemsiii. Fountains/water features	
		(b)	All works shall be given in accordance with the rules of the appropriate trades hereof.	

SECTION X LANDSCAPING

The Unit of Billing Shall be the Metre GENERALLY TO SECTION X

			GENERALLY TO SECTION X
Landscaping generally	X1	(a) F	Particulars of the following shall be given i. Method of cultivating and degree of tilth. ii. Kind , quality and composition of materials.
			Cultivating shall be given in square metres stating the average depth and is deemed to nclude the removal of stones.
			Type and rate of surface applications shall be given in square metres and will be deemed to include working in if required.
Seeding, turfing and grassing	X2	(a) F	Particulars of the following shall be given
			 i. Mix of materials ii. Method of application iii. Method of securing turves
		. ,	Seeding deemed to include raking or harrowing in and rolling and shall be given in square metres
		(c) (Cutting is deemed to include edge trimming
Planting	Х3	(a) F	Particulars of the following shall be given
			i. Size and type of pits, holes and trenches, excavated or formed
			ii. Any known name of plantings iii. Types of supports and ties
			iv. Special materials for refilling
			Work measured as item shall include for excavating or forming pits, holes or trenches, refilling, watering in, removing surplus excavated materials and labelling
		(c) F	Refilling will be deemed to include all necessary multiple handling
			Planting in cultivated or grassed areas prepared by others is deemed to include all necessary reinstatement
			Type of mulch, time and method of application shall be given in numbers stating the approximate size
		(f) F	Protection of plantings shall be enumerated stating
			 i. Type of tree guard and method of fixing ii. Type of spray and rate of application iii. Type of wrapping and chemical application
Watering, maintaining and protection	X4		runing, mowing, maintaining and protection of seedings/turves/grassing/plantings shall ving the period
Contouring	X5	Excavations, Eathworks".	, filling, etc., shall be given in accordance with the rules laid down under "Excavation and .
Topsoil, compost lime and fertilizer	Х6		compost shall be given in cubic metres, filling to plant boxes being given separately. rtilizer shall be given in kilograms and description shall be deemed to include spreading
Prunning of existing trees	X7	Prunning of	existing trees and shrubs shall be enumerated stating the type of shrub.
Rockery boulders	X8	Rockery bou	ulders shall be suitably grouped and be enumerated.
Retaining structures	Х9	_	ructures formed or filled gabion boxes and mattresses, concrete precast concrete, c., shall be given in accordance with the rules laid down in the relevant trades.
Pebble coverings	X10	Pebble cove	ering shall be given in square metres stating the type and thickness.

Ponds, water features	X11	Ponds, water features, etc., formed of concrete, precast concrete masonry, etc., shall be given in accordance with the principles laid down in the relevant trades.
Irrigation system	X12	Irrigation systems shall be given in accordance with the principles laid down in the relevant trades.

SECTION Y ROADWORKS The Unit of Billing shall be the Metre GENERALLY TO SECTION Y

GENERALLY TO SECTION Y					
Roadworks generally	Y1	(a)	Roadworl	ks shall be classified according to	
			i.	Type of material	
			ii.	Construction	
			iii.	Finishings	
Excavations, filling bases, etc	Y2	Excavation Earthwork	_	ases, etc., shall be given in accordance with the rules for "Excavation and	
Insitu concrete roads, paving, bases	Y3	Concrete	work shall	be given in accordance with the rules for "concrete works"	
Coated macadam asphalt roads pavings	Y4	(a)	Particular	rs of the following shall be given.	
			i. ii.	Kind, composition and mix of materials Method of application	
			iii.	Nature of surface treatment	
			iv.	Special curing of finished work	
			٧.	Nature of base	
			vi.	Preparatory work where bonding is included with the finish.	
		(b)	i.	All surfacing shall be given in square metres stating the thickness of each coat. There shall be no deductions for voids not exceeding 1 square metre.	
			ii.	Movement joints shall be given in linear metres	
			iii.	Works to falls shall be so stated. Works to falls and crossfalls and to slope not exceeding 15 degrees from horizontal shall be grouped together, and those exceeding 15 degrees from horizontal shall be grouped together	
Gravel, murram and pavings	Y5	(a)	The kind	and quality of materials and the method of compaction shall be given	
		(b)	Works sh	all be given in square metres stating the compacted thickness	
		(c)	Works to	slope shall be measured in accordance with rule W22 (b) (iii) hereof.	
Interlocking bricks, concrete blocks roads pavings	Y6	(a)	Particular	rs of the following shall be given	
			i.	Kind and quality of materials including bedding	
			ii.	Size, shape and thickness of units	
			iii.	Nature of surface finish	
			iv.	Bedding or other method of fixing	
			٧.	Treatment of joints	
			vi.	Layout of joints	
			vii. viii.	Nature of base Preparatory work	
			VIII.	Treparatory work	
		(b)		Il be measured in square metres stating the nominal thickness, pattern, and if ys, average size of each bay.	
		(c)	Works to	slope shall be measured in accordance with rule W22 (b) (iii) hereof.	
Road kerbs, channelling, edging, humps and shoulders	Y7		kerbs, char ne relevant	nneling, edging, humps and shoulders shall be measured in accordance with the trades.	
Road signs and crash barriers	Y8	Works to trades.	road signs	and crash barriers shall be given in accordance with the rules of the relevant	
Embarkments, and gabions	Y9	Works to trades.	embarkme	ents and gabions shall be given in accordance with the rules of the relevant	

Jointing	Y10	Movement joint shall be given in linear metres.

Painting Y11 Paintwork shall be given in accordance with the rules for "Painting and Decorations."

SECTION Z FENCING The Unit of Billing shall be the Metre GENERALLY TO SECTION Z

Fencing generally	Z1	(a)	Particulars of the following shall be given:-
			i. Kind of material (e.g. softwood; hardwood; concrete; steel).ii. Preliminary treatment of material (e.g. impregnating; galvanizing).
			Fencing specially designed to suit sloping ground shall be so described.
		(c)	Fencing set out to a curve (i.e. straight between posts) shall be described irrespective of radius. Curved fencing (i.e. curved between posts) shall be so described stating the radius.
		(d)	Posts, struts and other supports which occur at regular intervals in fencing shall be given in the description of the fencing stating the size, the spacing, the height above the surface of ground or base and the depth below such surface.
		(e)	End-posts, angle posts, gate-posts, straining-posts and other posts which differ from those given in the description of the fencing shall each be enumerated separately as extra over the fencing in which they occur, stating the size and the depth in the ground or other base. Struts shall be given in the description stating the size, the number and the method of fixing to the post.
		(f)	Excavating and bedding ends of posts, struts end posts, angle posts, gate stops, gate catches and the like in concrete shall be given in the description of the items stating the composition and mix of the concrete.
		(g)	Fencing shall be measured overall (i.e. over posts and other supports). The height of fencing shall be measured from the surface of the ground (or other base) to the top of the filling (or to the top wire) between the posts.
		(h)	Bases to posts and slays shall be included in the description
Post-and-wire fencing	72	and numb the posts;	OPEN-TYPE FENCING -wire fencing shall be given in linear meters stating the height of the fencing, the gauge per of line-wires, the method of attaching the line-wires to the posts (eg threaded through stapled to the posts) and the method of straining. Barbed wire shall be so described e spacing of the points.
Post-and-rail fencing	Z3		rail fencing shall be given in linear metres stating the height of the fencing, the size and f horizontal rails and the method of fixing the rails to the posts.
Chain-link and wire- mesh fencing	Z4	height of t	fencing and wire-mesh fencing shall be given separately in linear metres stating the fencing, the gauge and number of line-wires, the method of attaching the line-wires to the size of mesh and gauge of wire in the fabric and the method of attaching the fabric to the .
Metal bar fencing	Z 5	(a)	Metal bar fencing shall be given in linear metres stating the height of the fencing, the size, spacing and arrangement of the bars, the treatment of the tops of the bars (e.g. pointed; of shaped), the size and number of the rails, the method assembling (e.g. riveted; welded) and the method of fixing the rails to the post. Side-stays, backstays and struts shall each be enumerated separately stating the size and the method of fixing
		(b)	For railings forming part of a building see Section P hereof
Close-boarded fencing	Z 6	number of type of jo rails. Wea	rded fencing shall be given in linear metres stating the height of the fencing, the size and if horizontal rails, the method of jointing the rails to the posts, the type of boarding, the int between boards (e.g. flush; overlapping) and the method of fixing the boarding to the other capping and supporting fillets shall be given in the description stating the size of overs and the method of fixing to the boarding.
Built-up concrete fencing	Z7	and thickr	oncrete fencing shall be given in linear metres stating the height of the fencing, the size ness of the infilling, fencing units between posts, the method of jointing the units to the size of the cappings and the method of fixing the cappings to the infilling units.
Corrugated Fencing	Z8	_	d fencing shall be given in linear metres stating the height of the fencing, the size and f horizontal rails, the method of fixing the rails to the posts, the kind and gauge or

thickness of the corrugated sheeting, the extent of the laps in the sheeting, the treatment of the tops of the corrugations (e.g. pointed; shaped) and the method of fixing the sheeting to the rails.

GATES

Gates 29 (a) Gates shall be enumerated stating the size and the method of construction. Hinges, locks, fastenings and the like shall be given in the description. Gate-posts (other than those forming part of the fencing) shall be enumerated stating the size

(b) Gate-stops, gate-catches and independent gate-stays shall each be enumerated separately stating the method of fixing