

SRI LANKA STANDARD 573 : 1999

UDC 69 (083.74)

**METHOD OF
MEASUREMENT OF BUILDING WORKS
(FIRST REVISION)**

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**METHOD OF MEASUREMENT OF BUILDING WORKS
(FIRST REVISION)**

SLS 573 : 1999

Gr. 25

Prepared On Behalf of
SRI LANKA STANDARDS INSTITUTION
by
THE INSTITUTE FOR CONSTRUCTION TRAINING & DEVELOPMENT (ICTAD)

SRI LANKA STANDARDS INSTITUTION

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SRI LANKA STANDARD
METHOD OF MEASUREMENT OF BUILDING WORKS
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PREAMBLE

The Sri Lanka Standard Method of Measurement of Building Works (SLS 573) was first developed on a request made by National Metric Conversion Authority, and was published in 1982 on the recommendations of the Civil Engineering Divisional Committee.

This is the first revision of **SLS 573 : 1982**. This revised standard was prepared by a Technical Committee appointed by the Institute for Construction Training and Development in association with the Sri Lanka Standards Institution and was authorized for adoption and publication as a Sri Lanka Standard by the Council of the Sri Lanka Standards Institution on 1999-04-08.

The constitution of the Technical Committee and the relevant Working Committees, Advisory Committees are given in the foreword to the standard.

Measurement occupies a very important place in the planning and execution of any building work from the time of first estimate to final completion of the project and settlement of payments. The methods followed for such measurements are not uniform, and considerable differences exist between the practices followed by different construction agencies and state sector organizations. While it is recognized that each system of measurement has to be specifically related to the administrative and financial organizations within the institution responsible for the work, an unification of various systems at the technical level has been accepted as desirable. This standard attempts to fulfill this need. It deals with the method of measurement of building works and applies equally to the preparation of estimates and bills of quantities and to site measurements. It provides guide lines in carrying out this work using metric units only.

This revision includes sections dealing with paving, glazing and mechanical installations, and is a comprehensive, complete document. It contains twenty two work sections. The classification table arrangement of this standard and the content was greatly influenced by the current practice in Sri Lanka and the following publications:

- a) The present SLS 573 : 1982 Method of Measurement of Building Works ;
- b) Civil Engineering Standard Method of Measurement (Second Edition) of the Institution of Civil Engineers of United Kingdom;
- c) SMM7 : Standard Method of Measurement of building Works of Royal Institution of Chartered Surveyors and the Building Employers Confederation of United Kingdom; and
- d) Model Bill of Quantities prepared by the Australian Institute of Quantity Surveyors (W A Chapter) - First edition.

In the application of this standard, clarifications in the interpretation may arise. In such instances, assistance from the Sri Lanka Standards Institution should be sought.

The initiative taken by the Institute for Construction, Training and Development to revise this standard, and the contribution made in this connection is gratefully acknowledged.

This document has been prepared by

**THE INSTITUTE FOR CONSTRUCTION TRAINING &
DEVELOPMENT (ICTAD)**

For

THE SRI LANKA STANDARDS INSTITUTION

FORWARD

SRI-LANKA STANDARD METHOD OF MEASUREMENT
OF BUILDING WORKS

HISTORICAL DEVELOPMENT OF THE STANDARD
METHOD OF MEASUREMENT FOR BUILDING WORKS
IN SRI LANKA

Sri-Lanka did not have a standard method of measurement of building works prior to 1968, though there was an attempt in 1950 which could be termed as the first form of the method of measurement in Sri-Lanka. However in 1968, the first Sri-Lankan Standard Method of Measurement was developed.

In 1982 Sri Lanka standards Institution initiated the development of the SLS 573 which is the current edition used in the industry. This was not complete as sections dealing with paving, glazing, and mechanical installations were not included.

The Institute of Quantity Surveyors Sri-Lanka, along with ICTAD felt the need, for a complete up-to-date Standard Method of Measurement. Accordingly, ICTAD initiated action to provide this revision.

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The Institute for construction training & development (ICTAD) being the authority for the development of the Construction Industry of Sri-Lanka initiated and undertook the revision and in this connection, a special thanks goes to Mr. E.I. Munasinha B.Sc Eng Hons (Lond), DIC, MICE, MI Struct E. Chairman ICTAD for initiating the revision.

The need became obvious when the cost information collected by ICTAD from various firms of the construction industry lacked uniformity due to nonexistence of standard phraseology arising from the absence of a complete and well structured standard method of measurement.

The SLS 573 first revision 1994, itself is a comprehensive, complete document. It contains twenty two work sections. The classification table arrangement of this standard and the content was greatly influenced by :

A) Civil Engineering Standard Method of Measurement Second Edition of the Institution of Civil Engineers United Kingdom

B) SMM7 : Standard Method of Measurement of Building Works of Royal Institution of Chartered Surveyors and the Building Employers Confederation of United Kingdom.

C) The present SLS 573 : Method of Measurement of Building Works 1982 of Bureau of Ceylon Standards.

D) Model Bill of quantities prepared by the Australian Institute of Quantity Surveyors (W.A. Chapter) first edition.

E) The current practice in Sri Lanka.

Sri-Lanka Standards Institution expresses its sincere thanks to the Working Committee Members & The Advisory Committee members of this revision for their untiring invaluable effort in producing this document.

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SECTION A

GENERAL RULES

This selection of the standard covers the general rules applicable to measurement of building works

1.0 SCOPE

- 1.1 This selection of the standard covers the general rules applicable to measurement of building work.
- 1.2 This Standard Method of Measurement Provides a uniform basis for measuring buildings work and embodies the essentials of good practice.

2.0 USE OF THE TABULATED RULES

- 2.1 The rules in the document are set out in tables. Each section of the rules comprises information (to be) provided, classification tables and supplementary rules. The tabulated rules are written in the present tense.
- 2.2 Horizontal lines divided the classification table and supplementary rules into zones to which different rules apply.

Classification tables

- 2.3 With in the classification table where a broken line is shown, the rules given above the broken line may be used as alternatives.
- 2.4 In referring to columns in classification tables the measurement unit column has been disregarded.
- 2.5 The left hand column of the classification table lists descriptive features commonly encountered in building works. The next column lists further sub-groups into which each main group of items shall be divided and similarly the third column provided for further division. The lists in these columns are not intended to be exhaustive.

- 2.6 Each item description shall identify the work with respect to one descriptive feature drawn from each of the first three columns in the classification table and as many of the descriptive features in the fourth column as are applicable to the item. The general principle does not apply to preliminaries in that it will be necessary to select as many descriptive features as appropriate from each column.
- 2.7 Where the abbreviation (nr) is given in the classification table the quantity shall be stated in the item description.

Supplementary rules

- 2.8 Within the supplementary rules everything above the horizontal line, which is immediately below the classification table heading, is applicable throughout that table.
- 2.9 Measurements rules set out when work shall be measured and the method by which quantities shall be computed.
- 2.10 Definition rules define the extent and limits of the work represented by a word or expression used in the rules and in a bill of quantities prepared in accordance with the rules.

- 2.11 Coverage rules draw attention to particulars incidental work which shall be deemed to be included in the appropriate items in the bill of quantities to the extent that such work is included in the tender documents. Where the coverage rules include materials they shall be mentioned in the item description.
- 2.12 The column headed supplementary information contain rules governing the information which shall be given in addition to the information given as a result of the application of rule 2.6.
- 2.13 A separate item shall be given for any work which differs from other work with respect to any matter listed as supplementary information.

3.0 BILLS OF QUANTITIES

- 3.1 Bills of quantities shall fully describe and accurately represent the quantity and quality of the works to be carried out.
- 3.2 More detailed information than is required by these rules shall be given where necessary in order to define the precise nature and extent of the required work.

4.0 MEASUREMENT

- 4.1 Unless otherwise specifically required by the rules given or otherwise specifically stated in the Bill of Quantities, work shall be measured net as fixed in position overlaps.
- 4.2 Dimensions used in calculating quantities shall be taken to the nearest 10mm (ie. 5mm and less than 5mm shall be disregarded).
- 4.3 Quantities measured in tonnes shall be given to two decimal places.
- 4.4 Other quantities shall be given in the nearest whole except that any quantity less than ten shall be given as to the nearest 1st decimal.
- 4.5 where minimum deductions for voids or openings are dealt with herein, they shall refer to the following:-
- i. Voids or openings which are wholly within the boundaries of measured areas.
 - ii. Door, window and black openings.
 - iii. Voids or openings at the boundaries of measured piers, columns and similar members.

5.0 DESCRIPTIONS

- 5.1 Dimensions shall be stated in description generally in the sequence of length, width, height or thickness. Where ambiguity could arise, the dimensions shall be specifically identified.
- 5.2 All sizes, dimensions, girths, thicknesses, gauges, weights and other relevant information necessary for the proper assessment of items shall be included in the descriptions.
- 5.3 Where patented or standard components are specified these shall be fully described and the name of the manufacturer, catalogue reference etc. given. Alternatively a precise and unique cross reference to a catalogue or to standard specification may be given in an item description.
- 5.4 Descriptions of items or headings to groups of items shall contain reference to their general location in the works irrespective of the level.
- 5.5 Unless otherwise specifically stated in bill of quantities or herein, the following shall be deemed to be included with all items :-
- i. Labour and all costs in connection therewith.

- ii. Materials, goods and all costs in connection therewith.
 - iii. Tools, plant other than hoisting plant and all costs in connection therewith.
 - iv. Waste of materials.
 - v. Square cutting.
 - vi. Establishment charges, overhead charges and profit.
- 5.6 The forming of ends, angles, mitres and junctions between straight and raking or curved work shall unless stated otherwise herein, be held to be included with the work in which they occur.
- 5.7 Notwithstanding the provisions of this document for labours to be given in matters such labours may be included in the description of any linear item of work on which they occur.
- 5.8 Notwithstanding the provisions of this document for labours to be enumerated, such labours may be included in the description of any enumerated item of work on which they occur.

6.0 DRAWN INFORMATION

6.1 Location Drawings

6.1.1 Block Plan : Shall identify the site and locate the outlines of the building works in relation to a town plan (or other context).

6.1.2 Site Plan : Shall locate the position of the building works in relation to setting out points, means of access and general layout of the site.

6.1.3 Plans, Sections and Elevations shall show the position occupied by the various spaces in a building and the general construction and location of the principal elements.

6.2 Component Drawings : Shall show the information necessary for manufacture and assembly of a component.

6.3 Dimensioned diagrams : Shall show the shape and dimensions of the work covered by an item and may be used in a bill of quantities in place of a dimensioned description, but not in place of an item otherwise required to be measured.

7.0 PROVISIONAL OR PRIME COST SUMS

7.1 Where this document requires provisional or prime cost sums to be given in accordance with this clause, the choice of terms shall be made in conformity with the following definitions unless otherwise provided in the conditions of contract.

7.1.1 The term "Prime Cost Sum" is defined a sum provided for work or services to be executed by a nominated sub contractor, 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 required by the general contractor and provision shall be made for the addition thereof.

7.1.2 The term "Provisional Sum" is defined as a sum provided for unforeseen works or for the value of works, where the quantity of work required cannot be accurately determined at the time of bill preparation.

7.2 Works which are to be carried out by nominated sub contractors shall be given as p.c sums in accordance with provisions of 7.1.1. unless otherwise stated in the conditions of contract.

7.3 General attendance on provision of general facilities for nominated sub contractors shall be defined and given as item following each p.c. sum.

7.4 Special attendance on special facilities for nominated sub contractors shall be given as an item giving particulars.

7.5 Materials and goods which are required to be obtained from nominated suppliers shall be given as p.c. sums in accordance with provisions of 7.1.1

7.6 Fixing materials and goods obtained from nominated suppliers shall be given in accordance with the provisions of the appropriate section herein. Where the cost of transporting such materials and goods to the site are required to be borne by the contractor, particular shall be given.

7.7 Where the condition of contract require that a sum to be provided for work or services to be executed by a nominated sub contractor, authority or a public undertaking or for materials or goods to be obtained from a nominated supplier, be defined as "provisional sum" then, provision will be made following each such provisional sum item, for addition of profit, general attendance and / or special attendance.

8.0 WORKS OF SPECIAL TYPES

Work of each of the following special types shall be separately identified:

- 8.1 Work on or in existing buildings - see general rule 9.
- 8.2 Work to be carried out and subsequently removed (other than temporary works).
- 8.3 Work carried out in or under water shall be so described stating whether canal, river or sea water and (where applicable the mean spring levels of high and low water.
- 8.5 Work carried out in compressed air shall be so described stating the pressure and the method of entry and exit.

9.0 WORK TO EXISTING BUILDINGS

- 9.1 work to existing buildings shall be so described. Such work is defined as work on, or in, or immediately under the work existing before the current project.
- 9.2 The additional rules for work to existing buildings are to be read in conjunction with the preceding rules in the appropriate work sections.

- 9.3 A description of the additional preliminaries which are pertinent to the work to the existing building shall be given, drawing attention to nature of the work.

10.0 CIRCULAR WORK

- 10.1 Where the rules require work to be described as curved with the radii stated details shall be given of the curved work including if concave or convex, if conical or spherical, if to more than one radius and shall state the radius or radii.
- 10.2 The radius stated shall be the mean radius measured to the centre line of the material unless otherwise stated.

11.0 SYMBOLS AND ABBREVIATIONS

- 11.1 The following symbols and abbreviations are used in this method of measurement.

m	=	metre
m ²	=	square metre
m ³	=	cubic metre
mm	=	milli metre
nr	=	number
kg	=	kilogram
t	=	tonne
h	=	hour
pc sum	=	prime cost sum
pro. sum	=	provisional sum
>	=	exceeding
≥	=	equal to or exceeding
≤	=	not exceeding
<	=	less than
%	=	percentage

11.2 Cross references within the classification tables are given in the form:

Work Selection Number	Number from first Column	Number from second Column	Number from third Column
-----------------------	--------------------------	---------------------------	--------------------------

Example :

D.1.1.1

Excavation and Earthwork
 Site preparation
 Clearing site vegetation:
 of bushes, scrub,
 undergrowth etc.....

SECTION B

PRELIMINARIES

This section of the standard covers the method of measurement of preliminaries of building works

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
Location drawing as defined in the General Rules							
Information to facilitate visiting site, addresses where drawings may be inspected							
In state sector Building & Civil Engineering contracts it is compulsory to adhere to ICTAD preliminary bill (Ref Treasury Circular No FIN 286)							
CLASSIFICATION TABLE							
1 Project particulars	1 Name nature and location 2 Names and addresses of Employer & Consultants 3 Any other particulars which employer may wish to include		Note				
2 Drawings	1 List of drawings from which the bills of quantities were prepared						
3 Description of site	1 Site boundaries 2 Existing buildings on or adjacent to the site 3 Existing mains/services 4 Others, details stated				D1 Where possession of the site is to be given in section at different dates it shall be so stated and the dates given D2 Where section completion of work is required it shall be so stated and dates given		

CLASSIFICATION TABLE			MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
4 Description of the work	1 Elements of each new building					
	2 Dimensions and shape relating to building		1 Given only when the equivalent information is not indicated on the drawings			
	3 Details of related work by others					
5 The contract	1 Schedule of clause headings of standard conditions		Item			
	2 Special conditions or amendments to standard conditions					
	3 Appendix insertions					
	4 Employer's insurance responsibility			1 Given only when not included in schedule of clause headings of standard conditions		
	5 Contractor's insurance responsibility					
6 Provision content and purpose of documents	1 Drawings 2 Bill of Quantities	1 Details of Employer's requirements or limitations stated				
	3 Specifications		1 Where not included in Bill of Quantities			
7 Management of the works					D3 Management includes management, programming and production	
8 Quality standards			Pro.		D4 Quality standard control includes	

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and contr- ol		Sum		testing other than those stated in specific sections	
9 Security safety and prote- ction	1 Noise and Pollu- tion 2 Maintaining adjo- ining buildings 3 Maintaining publ- ic and private buildings 4 Maintaining serv- ices 5 Security 6 Protection of work in all sect- ions 7 Others	Item			
10 Specific limitati- ons on method/ sequence /timing	1 Design constrain- ts 2 Method and seque- nce of work 3 Access 4 Use of the site 5 Use or disposal of materials 6 Working hours 7 Others				
11 Faciliti- es/ Temporary works/ services	1 Offices 2 Sanitary accommo- dation 3 Temporary fences hoardings, screen and roofs 4 Name boards 5 Telephone instal- lation and maint- enance 6 Surveying equipm- ent 7 Others				C1 Works of tempor- ary nature are deem- ed to include rates, fees & charges
12 Site accommo- dation			1 Made available by the Employer details stated and conditions stated	D5 Site accommodat- ion includes offic- es, laboratories, stores, compounds, sanitary facilities and the like	C2 General attenda- nce is deemed to include the use of the contractor's temporary roads, pavings and paths, standing scaffolds

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
13 Services and facilities	1 Power 2 Lighting 3 Water 4 Telephone 5 Safety, Health and Welfare 6 Storage of materials 7 Security 8 Maintain public and private roads 9 Hoisting plants 10 Others details stated 11 General attendance on nominated sub contractors					D6 Items listed are not exhaustive and are for convenience of pricing only the provision of temporary lighting and water supplies clearings away rubbish, provision of space for sub contractors officers and the storage of his plant and materials and the use sanitary accommodation and welfare facilities and the like	
14 Temporary works	1 Temporary roads 2 Hoardings and fencing 3 Temporary walkways 4 Scaffolding and supports 5 Temporary screens 6 Others, details stated			1 Made available by Employer, details and conditions stated			
15 Work/material by Employer	1 Work by others directly employed by the Employer, details stated 2 Attendance on others directly employed by the Employer, details stated						
16 Nominated sub contractors	1 Sub-contractor's work 2 Main contractor's	1 Description stated in accordance with general rule	PC Sum		M1 General attendance on subcontractor's work is measured in No :13		

	profit		%					
	3 Special attendance details stated	1 Scaffolding 2 Access roads 3 Hard standings 4 Storage 5 Power 6 Others	Item				D7 Scaffolding under this rule is special scaffolding	
17 Nominated suppliers	1 Supplier's materials	1 Description	PC Sum		M2 Fixing only such items is measured in the appropriate work section			
	2 Main contractor's profit		%					
18 Work by statutory authorities	1 Work by local authority 2 Work by statutory undertakings		Pro. Sum ----- PC Sum	1 General attendance as No:13			D8 Work by statutory authority includes work by public companies responsible for statutory work when executing their statutory duty	
19 Dayworks	1 Labour 2 Materials 3 Plant		Pro. Sum					
20 Contingency Sum			Pro. Sum				D9 An amount of money allowed for unforeseen works	
21 As built drawings	1 Plumbing 2 Drainage 3 Electrical 4 Mechanical 5 Fire 6 Security 7 Telephones 8 Others, details stated	1 No. of sets stated	Item					

SECTION C

DEMOLITION /ALTERATION/ REPAIR AND MAINTENANCE

This Section of the standard covers the Method of Measurement of demolitions, alterations, repairs and maintenance work of building works.

SECTION C1

DEMOLITIONS

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
<p>The following information is shown on location drawings as indicated under Section B Preliminaries :</p> <p>a. The location and extent of existing structures to be demolished and the sequence of operation.</p> <p>b. The scope location of the work relative to the existing layout indicating the existing structure.</p> <p>c. Provision of temporary hoarding, dust screens, dust sheets and compliance with relevant standards and regulations.</p>							
CLASSIFICATION TABLE							
1 Whole building	1 Description sufficient for identification	1 Levels to which structures are demolished	Item	1 Materials remaining the property of the Employer 2 Materials for re-use 3 Making good structures 4 Leaving parts of existing walls temporarily in position to act as buttresses. 5 Temporarily	<p>D1 Materials arising from demolitions are the property of the contractor unless otherwise stated</p> <p>D2 Demolishing parts of structures exclude items covered by Section C2</p>	<p>C1 Demolitions are deemed to include:</p> <p>a Disposal of materials other than those remaining the property of Employer.</p> <p>b. Temporary support incidental to demolitions which is at the discretion of the contractor</p>	<p>S1 Method of demolitions where by specific means</p> <p>S2 Employer's restrictions on methods of disposal of materials</p>
2 Disconnection and sealing off services		1 Electrical 2 Plumbing 3 Drainage 4 Telephone 5 Other					
3 Grubbing up foundations		1 Material stated					

4 Hacking up pavings		1 Thickness stated 2 Material stated	m ²
5 Concrete work	1 ≤ 150 mm thick	1 Thickness stated	m ³
	2 > 150 mm thick		
	3 Hacking up kerbs, gutters and similar items	1 Size stated	m
6 Brickwork and Masonry	1 Thickness stated		m ²
7 Chimney stacks boiler and the like	1 Dimensioned description		m ³
		nr	
8 Flooring & ceiling	1 Construction details stated		m ²
9 Roofs	1 Details of general construction stated		
10 Truss	1 Span, material and construction stated		nr
11 Walls	1 Details of construction stated		m ²
12 Doors & windows			nr
13 Trims & other items in connection	1 Size and type stated		

diverting, maintaining or sealing off existing services

C2 Architraves frames, pelmets, cill boards and the like are deemed to be included unless otherwise stated

CLASSIFICATION TABLE					MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
14 Sanitary fittings & accessories								
15 Support of structures not to be demolished	1 Position and type of and nature of structure or road to be shored		Item	1 Providing and erecting 2 Maintaining, duration stated 3 Clearing away 4 Cutting holes in the structure, details stated 5 Making good all work disturbed		D3 Support is other than temporary support indicated to demolitions	C3 Support is deemed to include nails, wedges and bolts	
16 Support of roads and the like								

SECTION C2

ALTERATION

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION	
<p>The following information is shown either on location drawings under B Preliminaries or on drawings which accompany the bills of quantities.</p> <p>a The scope and location of the work relative to the existing layout indicating the existing structure.</p>				<p>M1 The rules with in this section apply to works to existing buildings</p> <p>M2 Any operation to existing building involving removal of existing materials is measured within this section.</p>	<p>D1 Materials arising from alterations are the property of the contractor unless otherwise stated.</p> <p>D2 Location is stated relative to existing building.</p>	<p>C1 Shoring & scaffolding incidental to the work disturbed by such shoring and scaffolding is deemed to be included within each item.</p>	<p>S1 Method of operation where by specific means</p> <p>S2 Setting a side and storing materials remaining the property of the Employer or those for re-use.</p> <p>S3 Employers restrictions on method of disposal of materials</p>	
CLASSIFICATION TABLE								
1 Removing fittings and fixtures (nr)	<p>1 Details sufficient for identification stated</p> <p>2 Dimensioned description sufficient for identification including type and thickness of existing structure</p>		Item	<p>1 Making good structures</p> <p>2 Extending and making good finishings</p> <p>3 Inserting new work details stated</p>	<p>M3 Details stated for inserting new work are the equivalent of those details required by the rules for measurement of the same in other work sections.</p>	<p>D3 Inserting new work includes refixing and re-using removed materials</p>	<p>C2 Alterations are deemed to include :</p> <p>a. Disposal of materials other than those remaining the property of the Employer or those for re-use</p> <p>b. Work incidental to alterations</p> <p>c. All new fixing or joining materials required</p>	<p>G4 Employer's restrictions on methods of shoring and scaffolding to be used.</p>
2 Removing plumbing and engineering installations			m ²					
3 Removing finishings								
4 Removing coverings								

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
5 Cutting openings or recesses	1 Size stated		nr				
6 Cutting back projections	1 Dimensioned description		Item				
7 Cutting to reduce thickness							
8 Filling in openings							

SECTION C3

REPAIR AND MAINTENANCE

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
<p>The following information is shown either on location drawings under B Preliminaries or on drawings which accompany the bills of quantities :</p> <p>a. The scope and location of the work relative to the existing layout indicating the existing structure.</p>				M1 The rules within this section apply to works to existing buildings	<p>D1 Materials arising are the property of the contractor unless otherwise stated</p> <p>D2 Location stated relative to the existing building.</p>	<p>C1 Shoring & scaffolding incidental to the work and making good all work disturbed by such shoring and scaffolding is deemed to be included</p> <p>C2 Items are deemed to include :</p> <p>a. Disposal of materials</p> <p>b. Incidental works</p>	<p>S1 Method of operation where by specific means</p> <p>S2 Setting aside and storing materials remaining in the property of the employer or those for re-use</p> <p>S3 Employers restrictions on methods of disposal, shoring and scaffolding.</p>
CLASSIFICATION TABLE							
1 Cutting out defective concrete and replacing with new	1 Dimensioned description	1 Plan concrete details stated 2 Reinforced concrete details stated	m ³ ----- m ² ----- m ----- nr	1 Treatment of reinforcement, details stated		C3 Formwork and making good to match existing are deemed to be included. C4 Work is deemed to include making good to match existing	S4 Method of bonding new to existing
2 Cutting out decayed defective or cracked work and replacing with new	2 Size and depth or thickness stated	1 Brickwork, details stated 2 Blockwork, details stated 3 Stonework details stated	m ² ----- m ----- nr	1 Making good with materials other than to match existing, details stated			
3 Repointing	1 Size and depth of raking out of existing joint		m ²	1 Type of pointing	M2 Details stated include bond and size of component.	C5 Repointing is deemed to include making good to adjoining work.	S5 Composition and mix of mortar

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
PLASTERING (OLD WALLS/ CEILINGS ETC....)							
4 Old walls & columns	1 Width \leq 300 mm		m	M3 Plastering on fillings to isolated openings is measured 0.5 m wider and 0.5 m higher than the dimensions of the openings		C6 Plastering old walls/ceilings, etc. is deemed to include hacking, preparing of and gubbing out where required and making good.	S6 Kind and quality of plaster, composition and mix of materials
5 Old ceilings & beams	2 Width > 300 mm		m ²				
6 Isolated openings							
7 Vents	1 Flush 2 Projecting		nr				
8 Cleaning Surfaces	1 Concrete 2 Brickwork 3 Blockwork 4 Stone work 5 Others, details stated	1 Facings	m ²	1 Washing 2 Abrasive blasting 3 Chemical treatments 4 Others, details stated.			S7 Cleaning materials
9 Repairing metal	1. Dimensioned description		m ²	M4 The dimensioned description must clearly identify all work in exploration, preparation and execution together with the associated works.	D3 Repairing includes renovation or refurbishment.		S8 Such information as appropriate to the repair renovation or refurbishment of the item
10 Repairing timber			m				
11 Treating existing timber			nr				S9 Such information as is appropriate to the treatment of timber to eradicate fungus attacks or similar infections.

SECTION D

EXCAVATION AND EARTHWORK

This Section of the standard covers the Method of Measurement of excavation and earthwork of building works excluding that of excavation work measured under sections Q,W and X.

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
<p>The following information is shown either on location drawings or under B Preliminaries :-</p> <p>a. The ground water level and the date when it was established</p> <p>b. Datum for levels</p> <p>c. Details of trial pits or boreholes including their location</p> <p>d. Live over or underground services indicating location</p> <p>e. Nature of materials to be excavated</p> <p>f. Features retained</p> <p>g. Restrictions on the use of explosives</p>					<p>D1 Commencing level shall mean one of the following</p> <p>1 Natural/existing ground level</p> <p>2 Reduced ground level</p> <p>3 Filled ground level</p> <p>4 Level with reference to a bench mark</p>		S1 Commencing level of excavation/ filling stated
CLASSIFICATION TABLE							
1 Site preparation	1 Clearing site vegetation	1 Description sufficient for identification	m ²	M1 Tree girths are measured at a height of 1.00 m above ground	D2 Site vegetation is bushes,shrub undergrowth hedges and tree and stumps ≤ 500mm girths	C1 This work is deemed to include: a Grubbing up roots b Disposal of materials c Filling voids	S2 Filling materials described
	2 Removing trees and stumps	1 Girth >500mm - ≤1000 mm 2 Thereafter in 500 mm stages	nr		D3 Particulars of cutting protection watering stated		
	3 Protection and retention of existing trees and shrubs						

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION				
2 Excavating	1 Top soil for preservation	1 Average depth/ stock piling method of disposal stated	m ²	M2 The quantities given for excavating and subsequent disposal shall be the bulk before excavating and no allowance is made for subsequent variations to bulk or for extra space for working space or to accommodate earth work support		C2 Surface excavation oversite not including top soil for preservation					
	2 To reduce levels	1 Average depth stated if ≤ 300 mm	m ³								
		2 If average depth >300 mm maximum depth stated									
	3 Basements and the like	1 Not exceeding 1.00 m 2 Exceeding 1.0 - 2.0 m 3 and thereafter in 1.00 m stages							D4 Total depth is from the commencing level to base of excavation in each stage.	S3 Measure to the outside of the footing	
									4 Pits		D5 Stating where area < 1.00 m ² on plan
									5 Trenches width > 300 mm		C3 Strip footings, ground beams, pipe trenches and similar items
	6 Trenches for rat baffle or Kerbing walls width less than 300 mm	1 Width and depth stated	m						C4 Excavating trenches for service pipes and cables in accordance with the appropriate sections concerned		
7 In tunnelling	1 Length, diameter & height stated	m ³									
3 Items extra over any types of excavating irrespective of	1 Excavating below water level 2 Excavating below ground water level			M3 Measurements are revised if post contract water level differs with precontract water level							

depth	3 Next to existing services	1 Type of service stated	m	M4 To be measured where precautions are specifically required	D6 Retaining a service is a precaution which is specifically required	S4 Nature of special requirement
	4 Around existing services crossing excavation		nr			
	5 Next to roadways 6 Next to existing building		m ³		D7 Next to roadways occurs where the horizontal distance from the face supported to the edge of the roadway or foot path is < the depth of the excavated face below the bottom of the edge of the roadway or foot path D8 Next to existing buildings occurs where the horizontal distance from the face supported to the nearest part of the foundations of the building is < the depth of the excavated face below the bottom of the foundations	
4 Breaking out existing material		1 Rock 2 Concrete 3 Reinforces concrete 4 Brickwork, Blockwork or stonework		1 Extra over any types of excavating irrespective of depth	D9 Rock is any material which is of such size and of position that it can only be removed by wedges, special plant or explosives	S5 Restrictions on methods of breaking out existing materials, blasting, use of explosives shall be stated under supplementary information

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
5 Breaking out hard paving thickness stated		1 Coated macadam or asphalt	m ²				
6 Working space allowance to excavations	1 Reduced levels, basements and the like 2 Pits 3 Trenches 4 Pile caps and ground beams between piles			M5 Working space is measured where the face of the excavation is <600 mm from the face of formwork, rendering, tanking or protective walls M6 The area measured is calculated by multiplying the girth of formwork rendering, tanking or protective walls by the depth of excavation below the commencing level of the excavation	D10 Back filling with special materials shall mean where selected or treated excavated materials or imported materials are used	C5 Additional earthwork support, disposal, back filling work below ground water level and breaking out are deemed to be included	S6 Details of backfilling with special materials
7 Earthwork support	1 Total depth ≤ 1.00 m 2 Total depth ≤ 2.00 m 3 and thereafter in 1.00 m stages	1 Distance between opposing faces ≤ 2.00 m 2 Distance between opposing faces 2.00 - 4.00 m 3 Distance between opposing faces ≥ 4.00 m		M7 Earthwork support is measured to the depth of all faces of excavation so supported	D11 Earthwork support is deemed to mean providing everything to uphold the sides of excavation by any means other than interlocking steel piling		
8 Disposal	1 Surface water 2 Ground water		Item		D12 Surface water is water on the surface of site and the excavations		
	3 Excavated material	1 Off site 2 On site	m ³	1 Specified locations	M8 The quantity given is the bulk		

				details stated 2 Specified handling details stated	before excavating and no allowance made for variations in bulk		
9 Filling	1 To excavation 2 For forming embankments or terraces 3 To make up levels 4 To external planters and the like position stated	1 Average thickness stated		1 On site 2 Off site	M9 Measured as equal to the void filled	D13 Filling with special materials shall mean where selected or treated excavated materials or imported materials are used	S7 Method of filling and compacting in layers S8 Details of filling with special materials S9 Method of consolidation stated S10 Kind and quality of materials stated
10 Surface treatment	1 Applying insecticides		m ²			D14 Surface treatments may alternatively be given in the description of any superficial item	S11 Kind and quality of materials and rate of application
	2 Levelling 3 Grading 4 Compacting 5 Scrubbing	1 Ground 2 Surface of filling 3 Bottom of excavations		1 Blinding, mater- ial stated	M10 Specific blinding beds are measured as filling		S12 Method of compacting S13 Kind and quality of materials
	6 Trimming	1 Sloping surfaces 2 Sides of cuttings 3 Rock to produce fair or exposed face		1 In Rock 1 Battered 2 Vertical 3 In Rock		D15 Work is only described battered or sloping where the slope >15° from horizontal	

SECTION E

PILING / DIAPHRAGM WALLING / UNDERPINNING

This section of the standard covers the Method of Measurement of cast insitu concrete piling, pre-cast concrete piling, steel sheet piling, timber piling, diaphragm walling and underpinning of building works.

SECTION E1

PILING

INFORMATION PROVIDED					MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
<p>The following information is shown either on location drawings under B Preliminaries or on further drawings which accompany the bills of quantities:</p> <p>a. The general piling layout</p> <p>b. The positions of different types of piles</p> <p>c. The positions of the work within the site and of existing services</p> <p>d. The relationship of adjacent buildings</p> <p>Soil description</p> <p>a. The nature of the ground in accordance with section D information provided</p> <p>b. Where work is carried out near canals, rivers etc., or the level of the ground in relation to the normal levels of the canal or river etc...</p> <p>c. Record of highest flood water levels</p> <p>d. The strata through which the piles are to be driven or bored</p> <p>Commencing levels</p> <p>a. The levels from which the work is expected to begin and from which measurements have been taken are stated</p>								
CLASSIFICATION TABLE								
CAST IN-SITU CONCRETE PILING					M1 Bored and driven depths are measured along the axis of the piles	D1 Piles comprising a driven light gauge casing which is first filled	C1 The work is deemed to include concrete placed in excess of the	S1 Kind and quality of materials and details
1 Bored piles	1 Nominal diameter stated	1 Total number, commencing	m	1 Preliminary piles				

(nr)		surface stated						
2 Driven shell piles		2 Total concreted length 3 Total length maximum depth stated		2 Continuous bored piles 3 Raking, inclination ratio stated	from the commencing surface to the bottom of the shafts of bored piles and to the bottom of the casing of driven piles	With concrete and then withdrawn are classed as driven shell piles	completed length	S2 Tests of materials S3 Type of grout S4 Details of compaction
3 Preboring		1 Maximum depth stated			M2 Pre-boring is only measured when it is specially required			
4 Back filling empty bores	1 Type of backfill material							
5 Items extra over piling	1 Breaking through obstructions		h		M3 Breaking through obstructions is only measured where obstructions are encountered above the founding stratum of the pile.			
	2 Enlarging bases for bored piles 3 Enlarging bases for driven shell piles	1 Diameter of enlarged base stated	nr				C2 The work is deemed to include work below the specified bottom	
6 Permanent casings	1 Internal diameter stated	1 Length \leq 13m (nr) 2 Length $>$ 13m (nr)	m	1 Wall thickness of casing stated	M4 Permanent casing measured from the commencing surface		C3 Permanent casing deemed to include driving heads and shoes	
7 Cutting off tops of piles (nr)	1 Nominal diameter stated	1 Total length		1 Tops of permanent casing	M5 Cutting off top is measured from top of driven length to cut level		C4 Cutting off tops of piles is deemed to include preparation and integration of reinforcement into pile cap or ground beam and disposal	

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION	
8 Reinforcement to piles	1 Nominal size of bars stated		t			C5 Reinforcement to piles is deemed to include tying wire, spacers, links and binders	S5 as S1	
	2 Nominal size of helical bars stated	1 Nominal diameter of piles stated					S6 Details of driving heads and shoes	
9 Disposal	1 Excavated materials	1 Off site 2 On site	m ³	1 Special locations, details stated	M6 The volume of disposal of surplus excavated materials is calculated from the nominal cross-sectional size of piles their lengths measured in accordance with M1. The volume of enlarged bases is added to the calculation			
10 Pile tests	1 Details stated		nr				S7 Timing and details of tests.	
PRE-CAST CONCRETE PILING					M7 The measurement for the total driven depth includes for driven extended piles.	D2 The total driven depth is that specifically required by the designer	C6 Driving heads and shoes are deemed to be included.	S8 as S1 S9 as S2 S10 as S13 S11 Details of driving heads and shoes
11 Pre-cast reinforced concrete piles	1 Nominal size stated	1 Total number driven, specified length and commencing surface stated	nr	1 Preliminary piles 2 Raking, inclination stated	M8 The driven depth is measured from the commencing surface to the bottom of the pile toe along axis of the pile.			
12 Pre-cast pre-stressed concrete piles		2 Total driven depth	m					
13 Pre-cast concrete hollow section piles								

14 Items extra over piling		1 Re-driving piles	nr		M9 Redriving piles is only measured where it is specifically required		
15 Pre-boring		1 Maximum depth stated	m		M10 Pre-boring is only measured where it is specifically required	C7 Pre-boring is deemed to include grouting up voids between sides of piles and bores	S12 Type of grout
16 Jetting							
17 Filling hollow piles with concrete		1 Plain	m				S13 Specification of concrete and reinforcement
		2 Reinforced, details stated					
18 Pile extensions		1 Total number	nr			C8 Preparing heads to receive pile extensions is deemed to be included	
		2 Extension length ≤ 3.00 m	m				
		3 Extension length > 3.00 m					
19 Cutting off tops of piles (nr)		1 Total length			M11 as M4	C9 Cutting off tops of piles is deemed to include preparation and integration of reinforcement into pile cap or ground beam and disposal	
20 Disposal	1 Excavated material	1 Off site	m ³	1 Specified locations details stated	M12 as M6		
		2 On site		2 Specified handling, details stated			
21 Pile tests	1 Details stated						S14 as S7

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION	
STEEL SHEET PILING								
22 Isolated steel piles	1 Mass per metre and cross-sectional sizes, or section reference stated	1 Total number driven, specified length commencing surface stated	nr	1 Preliminary piles	M13 The measurement of the total driven depths includes for driven extended piles M14 The driven depth is measured from the commencing surface to the bottom of the pile toe along the axis of the pile. The width taken as plan width	03 The specified length is that specially required by the designer	C10 The cost of extraction is deemed to be included with piles so described	S15 Kind and quality of materials S16 Tests of materials
		2 Total driven depth	m	2 Raking inclination ratio stated 3 To be extracted				
23 Interlocking steel sheet piles	1 Section modules and cross-sectional size, or section reference stated	1 Total area of specified length <14 m 2 Total area of specified length 14 - 24 m 3 Total area of specified length > 24 m 4 Total driven area	m ²		M15 The following separate items are required for each group of interlocking piles a. One or more items for the total area of the group of piles divided b. An item for the total driven area of the group of piles M16 The areas of items for interlocking piles are calculated by multiplying the mean developed horizontal lengths of the pile walls formed by depths measured in accordance with the			

					definitions of driven depths in case of items for the driven areas and by the lengths measured in accordance with the definition of lengths in the case of items for the specified areas of piles		
24 Items extra over interlocking piles	1 Corner 2 Junctions 3 Closures 4 Tapers	1 Type stated	m		M17 The length measured for items extra over to the total length		
25 Isolated pile extensions	1 Mass per metre & cross-sectional size or section reference stated	1 Total number	nr	1 Preliminary piles	M18 Separate items required for the length of pile extensions and for the number of pile extension	C11 The cost of extension is deemed to be included with piles so described	C12 Pile extensions are deemed to include the work necessary to attach the extension to the pile
26 Interlocking pile extensions	2 Section modules and cross-sectional size or section reference stated	2 Extension length ≤ 3.00 m	m	2 Raking, inclination ratio stated			
		3 Extension length > 3.00 m		3 To be extracted 4 Using materials arising from cutting off surplus lengths of other piles			
27 Cutting off surplus from specified lengths	1 Mass per metre and cross-sectional size or section reference stated	1 Isolated piles		1 Preliminary piles	M19 The length measured is the surplus length of each pile	C13 Cutting of surplus from specified lengths of piles is deemed to include provision and filling of working space and disposal	
		2 Interlocking piles (nr)		2 Raking, inclination ratio stated			
28 Cutting interlocking piles to form holes	1 Dimensioned description		nr				
29 Pile tests	1 Details stated						S17 as S7

CLASSIFICATION TABLE					MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
TIMBER PILING					M20 The measurement of the total driven depth includes for driving extended piles M21 The driven depth is measured from the commencing surface to the bottom of the pile toe along the axis of the pile	D4 as D2 D5 Ringing heads of timber piles is to protect them from brooming or splitting during driving	C14 Timber piling is deemed to include ringing heads with steel bonds and pile shoes	S18 as S1 S19 as S2 S20 as S11
30 Timber piling	1 Size stated	1 Total number commencing surface stated nr 2 Total driven length ≤ 5.00 m m 3 Total driven length ≤ 6.00 m 4 Thereafter in 1.00 m stages	1 Preliminary piles 2 Raking inclination ratio stated					
31 Items extra over piling		1 Breaking through obstructions	h		M22 as M3			
32 Pre-boring	1 Size stated	1 Maximum depth stated	m		M23 as M9		C15 as C7	S21 as S12
33 Cutting off tops of timber piles (nr)		1 Total length			M24 as M4			
34 Disposal	1 Excavated materials	1 Off site 2 On site	m ³	1 Special locations details stated 2 Special handling details stated	M25 as M6			
35 Pile tests	1 Details stated		nr					S22 as S7

SECTION E2

DIAPHRAGM WALLING

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
<p>The following information is shown either on location drawings under B Preliminaries or on further drawings which accompany the bills of quantities :</p> <p>a. The arrangement of diaphragm walls and their relationship to surrounding buildings.</p> <p>b. The depths, lengths and thickness of diaphragm walls.</p> <p>Soil Description</p> <p>a. The nature of the ground is given in accordance with Section D information provided.</p> <p>b. Where work is carried near canals, rivers etc.. or tidal waters, the level of the ground in relation to the normal level of canal or river etc.. or to the mean spring levels of high and low tidal waters is stated ; flood levels are stated where applicable.</p> <p>Commencing levels</p> <p>a. The levels from which the work is expected to begin and from which measurements have been taken are stated.</p> <p>b. Irregular ground is so described.</p>							
1 Excavation and disposal	1 Thickness of wall stated	1 Maximum depth stated	m ³	M1 The volume of excavation and disposal is calculated using the nominal lengths and depths of the walls. The depths are taken from the commencing surface		C1 Excavation of diaphragm walls is deemed to include preparation and upholding sides of excavations.	S1 Details of support fluid. S2 Limitations on method of disposal excavations.
2 Items extra over excavation	1 Breaking out existing materials	1 Rock 2 Concrete 3 Reinforced Concrete					

CLASSIFICATION TABLE				MESUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
	2 Breaking out existing hard pavings, thickness stated	4 Brickwork, block-work or stonework 5 Coated macadam or asphalt	m ²				
3 Back-filling empty trench	1 Type of fill materials stated		m ³				
4 Concrete	1 Thickness of wall stated			M2 Concrete volume is measured net except that deductions are not made for the following : a. reinforcement b. volume of structural steel except voids in boxed steel sections c. cast in accessories d. voids $\leq 0.05 \text{ m}^3$ in volume			S3 Materials and mix details S4 Tests
5 Reinforcement	1 Mild steel bar reinforcement, nominal diameter stated		t	M3 The mass measured for reinforcement include that of stiffening, lifting supporting steel cast in where specifically required		C2 Reinforcement in diaphragm walls shall be deemed to include supporting reinforcement and preparing protruding reinforcement to receive other work	
	2 High yield steel bar reinforcement nominal diameter stated						
6 Cutting off to specified level	1 Thickness of wall stated		m			C3 Cutting off to specified level is deemed to include provision and filling of working space and disposal.	

7	Trimming and cleaning face of diaphragm walls	1 Details stated		m ²			
8	Water-proofed joints	1 Type and method stated		m	M4 Waterproofed joints are only measured where they are specifically required		
9	Guide walls	1 One side 2 Both sides	1 Limitations on design and construction stated		M5 The lengths measured for guide walls are those of the diaphragm walls.		
10	Ancillary work in connection with diaphragm walling	1 Preparing cast in pockets or chases at junctions, details stated		Item		C4 Preparing cast in chases is deemed to include removing formwork and preparing cast reinforcement	
		2 Excavating temporary backfill		m ³			
		3 Removal of guide walls	1 One side 2 Both side	m	M6 The lengths measured for guide walls are those of the diaphragm walls	C5 Removal of guide walls is deemed to include of disposal	S5 Limitations on method of disposal
11	Tests	1 Details stated		nr			S6 Timing and details of tests

SECTION E3

UNDERPINNING

INFORMATION PROVIDED				MESUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
<p>The following information is either on location drawings under B Preliminaries or on further drawings which accompany the bills of quantities :</p> <p>a. The location and extent of the work</p> <p>b. Details of the existing structure to be underpinned</p> <p>Information regarding the nature of excavation work is described in accordance with Section D information provided.</p> <p>The regarding the nature of excavation work is described in accordance with Section D Information provided.</p> <p>The limit of length carried out in one operation and the number of sections the contractor is permitted to undertake at one time.</p>							
CLASSIFICATION TABLE							
1 Temporary support for existing structures	1 Particular requirements and details stated		Item				S1 Details of making good
2 Excavating	1 Preliminary trenches 2 Underpinning pile	1 Not exceeding 1.00 m deep 2 Excavating 1.00 m but not exceeding 2.00 m deep 3 and thereafter in 1.00 m stages	m ³	1 Curved 2 From one side only 3 From both sides	M1 Width allowance are related to the total depth of excavation measured from the top of the preliminary trench to the base of the underpinning pit as follows : a. 1.00m where the depth is ≤1.00m b. 1.5 where the depth is 1.00m-	D1 Preliminary trenches extend down to the underside of existing foundations Underpinning pile extend from the underside of existing foundations down to the base of the underpinning.	S2 Commencing level stated

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				<p>2.00 m c.2 Where the depth > 2.00m</p> <p>M2 The width of preliminary trench is calculated as the sum of any projection of the retained foundati- on beyond the face of the wall plus any projection of the underpinning beyond the face of the retained foundation plus working space allowance in accordance with Section D M5</p>		
3	Items extra over any type of excavation irrespective of depth					M3 Items extra over are measured in accordance with section D 3.1-6
4	Earthwork support	<p>1 Preliminary trenches</p> <p>2 Underpinning pile</p>	m ²			<p>M4 Earthwork support is measured in accordance with Section D7</p> <p>M5 Earthwork support to underpinning is measured to the back, front and both ends of the underpinning pile and also between each section of the underpinning</p>

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
5 Cutting away existing projecting foundations	1 Masonry 2 Concrete	1 Maximum width and depth of projection stated	m				
	3 Isolated footings	1 Dimensioned description	nr				
6 Preparing the underside of the existing work to receive the pinning up of new work	1 Width of existing work stated		m				
7 Disposal				M6 Disposal of water and excavated materials are measured in accordance with Section D.8			
8 Filling				M7 Filling is measured in accordance with Section D.9			
9 Surface treatments				M8 Surface treatments are measured in accordance with Section D.10			
10 Concrete				M9 Concrete, formwork, reinforcement, masonry and tanking are measured in accordance with the appropriate Sections			
11 Formwork							
12 Reinforcement							
13 Masonry							
14 Tanking							

SECTION F

CONCRETE WORKS

This Section of the standard covers the Method of Measurement of insitu concrete work, formwork, reinforcement in insitu concrete, ordinary pre-cast & pre-tensioned concrete, pre-cast and post tensioned concrete and insitu pre-stressed concrete of building works.

SECTION F1

INSITU CONCRETE

INFORMATION PROVIDED	MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
<p>The following information is shown on location drawings described under Section B Preliminaries or on further drawings which accompany the bills of quantities :</p> <p>a. The relative position of concrete member</p>	<p>M1 Concrete volume is measured net except that deductions are not made for the following :</p> <p>a.Reinforcement</p> <p>b.Structural steel except voids in bored steel</p> <p>c.Cast in accessories</p> <p>d.Voids $\leq 0.05 \text{ m}^3$ in volume (except voids in troughed & coffered slabs)</p> <p>e.Intersection of beams</p>	<p>D1 Concrete work shall be given separately as follows :</p> <p>a.Foundation up to the top of structural floor level of lowest basement floor</p> <p>b.From top of structural floor level of lowest basement of top of structural floor level of ground floor</p> <p>c.In the absence of basement floor foundation shall be measured up to the top of structural floor level of ground floor</p>	<p>C1 Concrete is deemed to include finishing as struck from basic finish formwork or with a non-mech.tamped finish unless otherwise required under worked finishes/cutting</p> <p>C2 Concrete work is deemed to include for mixing, depositing, handling hoisting & placing</p>	<p>S1 Kind & quality of materials</p> <p>S2 Tests of material & finish work</p> <p>S3 Measures to achieve water-tightness</p> <p>S4 Limitations on method, sequence speed or size of pouring</p> <p>S5 Methods of compaction & curing</p>

CLASSIFICATION TABLE				MESUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
					d. Work above top of structural floor level of ground floor shall be grouped together irrespective of no. of storeys		
CLASSIFICATION TABLE							
1 Testing (nr)	1 Type of tests specified	1 Mass concrete	nr				
2 Foundation	1 Screed, thickness stated	2 Reinforced concrete	m ²	1 Curved radii stated			S6 Poured into ground or into formwork.
	2 Column base 3 Column & pier on plan ≤ 0.5 m ² 4 Column & pier on plan > 0.5 m ² 5 Strip 6 Beams 7 Basement walls 8 Kerb 9 Raft		m ³	2 Other shape stated			
3 Beds & slabs on ground	1 Thickness ≤ 150 mm				M2 Measured over-all beams		S7 In coffered & trough slabs give particulars including Overall thickness of slab, size of ribs
4 Slabs	2 Thickness > 150 mm - ≥ 300 mm				M3 Thickness and other bearings are measured with the respective members		
5 Slabs to slope ≤ 15°	3 Thickness > 300 mm						
6 Slabs to slope > 15°							
7 Coffered troughed slab							
8 Walls					M4 Measured between columns		

9 Filling	1 Hollow steel members 2 Concrete block work				
10 Columns	1 Sectional area $\leq 0.10 \text{ m}^2$	1 Isolated 2 Attached		M5 Measured from floor level to floor level.	
11 Piers	2 Sectional area $> 0.10 \text{ m}^2$				
12 Beams				M6 Measured up to the underside of roof/floor slab or up to top of roof/floor slab for upstand beams	
13 Casing to steel work	1 Column 2 Beams 3 Lintels			M7 Length of beams measured between faces of columns	
14 Lintels (nr)					
15 Stairs and isolated steps	1 Steps, waist and the like 2 Beams				S8 Details given
	3 Landings 4 Balustrade wall				
16 Coping	1 Flat 2 Raking	1 Dimensioned description	m		
	3 String courses 4 Cornices 5 Similar projection			M8 Measured beyond the face of the walls, slabs or beams	
17 Ducts 18 Channels				M9 Measured the area of sides & bottom	
19 Channels formed in concrete beds					D2 Channels formed in concrete bed include S9 Description of extra concrete excavation and filling stated

CLASSIFICATION TABLE				MESUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
20 Machine bases & raised platform (nr)		1 Thickness ≤ 300 mm 2 Thickness > 300 mm	m^3		a. Formwork b. Extra concrete c. Excavation & filling		
21 Expansion joint 22 Weakened plane 23 Construction joint 24 Separation joint 25 Sealants	1 Dimensioned description		m	1 Plan 2 Formed 3 Cut	M10 The width or depth of joints is measured overall	D3 Plain joints are those which do not require formwork C3 Formed joints are deemed to include formwork C4 Angles and inter-sections in water stops are deemed to be included	S10 Details of filters, water stops, dowels backing strips and reinforcement crossing joints C5 Work is deemed to include preparation, cleaners, primers and sealers S11 Method of application S12 Preparation of contact surfaces cleaners, and the like
26 Work finishes /cutting into concrete	1 Width ≤ 300 mm 2 Width > 300 mm	1 Thickness stated	m^2	1. Plastic concrete 2. Hardened concrete		D4 Work finish in plastic concrete include : 1 Tamped finish 2 Floated 3 Trowelled finish Work finish in hardened concrete include : 1 Abrasive blasted finish 2 Scored finish 3 Tooled 4 Power ground	

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SECTION F2

FORMWORK

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
The following information is shown on location drawings described under Section B Preliminaries or on further drawings which accompany the bills of quantities : a. The relative position of concrete members b. The size of members				M1 Formwork shall be measured to the contact surface of concrete and formwork M2 Curved surfaces are so described with the radius stated	D1 Formwork shall mean everything necessary to uphold concrete D2 Formwork shall given in the same order as concrete. Refer D1 of insitu concrete	C1 Measurement for formwork is deemed to include for all necessary boardings supports, erecting, framing, cutting angles, cleaning wetting and treatment before placing concrete and removal	S1 Kind and quality of materials S2 Basic finish where not at the discretion of the contractor S3 Any special finish to be stated S4 Materials and workmanship, stating time to be left in position S5 Design responsibility
CLASSIFICATION TABLE							
1 Sides of foundation	1 Screeds 2 Column & pier bases 3 Strip footings 4 Ground beams 5 Kerbs 6 Rafts 7 Basement walls	1 Height ≤ 300 mm	m	1 Left in 2 Permanent	M3 Where foundations or foundation beams are partially above ground, formwork shall be measured full height to sides and so described M4 Where foundation or foundation beams are wholly in the ground and the excavation is expected to act as formwork, then formwork shall not be measured unless stated		
		2 Height > 300 mm	m ²				
2 Soffit of slabs	1 Slab thickness ≤ 150 mm	1 Horizontal 2 Sloping ≤ 15°		1 Height ≤ 3.5 m 2 and thereafter	M5 No deduction shall be made for		S6 Overall thickness to be stated

3 Soffit of coffered or troughed slabs	2 Slab thickness 150 - 300 mm 3 Slab thickness > 300 mm	3 Sloping > 15°		1.5 m stages 3 Left in 4 Permanent	openings of 0.5m ² or less M6 Soffits of coffered or troughed slabs are measured as if projected surface on plan		for coffered or troughed slabs
4 Soffit of landings							
5 Soffit of stair flights							
6 Edges of ground slabs							
7 Edges of floor and roof slabs	1 Height ≤ 300 mm 2 Height > 300 mm						
8 Edges of landings							
9 Sides of stair flights					M7 Height of risers are measured between top and bottom nosings M8 Widths are measured overall		
10 Sides of risers							
11 Sides of walls	1 Vertical 2 Battered 3 Curved, radii stated	1 Height ≤ 3.5 m above floor level 2 Height > 3.00 m above floor level		1 Left in 2 Permanent to both sides 3 Permanent to one side only, wall thickness and background to other side stated	M9 No deductions shall be made for openings of 0.5m ² or less M10 The area measured for walls whose height is > 3.0 m includes the area below 3.00 m high		D5 Floor level means the level of the floor frame which the formwork is supported

CLASSIFICATION TABLE			MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
12 Sides of columns	1 Isolated 2 Attached	1 Square or rectangular 2 Circular 3 Hexagonal 4 L-shape 5 U-shape				C2 Formwork to beam column and casings is deemed to include ends
13 Sides & soffit of beams	1 Isolated 2 Attached 3 Upstand					
14 Sides & soffit of lintels						
15 Formwork to sides of plant machine base & raised platform	1 Height \leq 300 mm		m			
	2 Height > 300 mm		m ²			
16 Cornices & mouldings			m	1 Dimension, description & shape stated		
17 Copings						
18 Gutters						
19 Hoods & sunshades	1 Vertical 2 Edges 3 Horizontal	1 Girth \leq 300 mm	m ²			
		2 Girth > 300 mm				
20 Extra over a basic formwork finish for formed finishes	1 Slabs 2 Walls 3 Beams 4 Columns 5 Other stated				D6 Formed finishes are those where a finish other than a basic finish is defined	S7 Details of formed finish

SECTION F3

REINFORCEMENT IN INSITU CONCRETE

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
<p>The following information is shown on location drawings described under section 8 Preliminaries or on further drawings which accompany the bills of quantities :</p> <p>a. The relative position of concrete members</p>				M1 Reinforcement shall be given separately as per D1 of INSTU CONCRETE		C1 Reinforcement is deemed to include for cleaning, cutting, bending, fabricating, binding wires, ties, spaces, chairs placing and provision of all necessary temporary fixing & supports unless other wise stated separately	<p>S1 Kind and quality of materials</p> <p>S2 Details of tests</p> <p>S3 Bending requirements</p> <p>S4 Any special requirements as to welding hot or cold</p> <p>S5 Laps & splices and measurement allowances</p>
CLASSIFICATION TABLE							
1 Mild steel round bar	Size of Bar	1 In column bases and rafts	t		M2 Bar reinforcement shall be measured to the length shown or specified and the length of bars in kerbs, hooks, cranks, splices and the like shall be measured.	D1 Foundation means work below the lowest structural floor level	
2 High yield Tor steel bar	1 Diameter < 10 mm 2 Diameter 10-16 mm 3 Diameter > 16 mm	2 In strip footings and ground beams 3 In beds and slabs on ground 4 In suspended slabs, hoods & sun-shades 5 In walls 6 In columns & piers 7 In beams & lintels 8 In stairs & landings 9 In casing to steel work			M3 No allowance shall be made for rolling margin		
3 Rib steel bar					M4 Where bar reinforcement is specified or to be lapped or spliced,		

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
					the length of bar in such laps or splices as specified or detailed shall be measured M5 Where the position of such laps or splices is not indicated, allowance for same shall be measured at centres of 6m		
4 Special spacers & chair supports	1 Dimensioned description				M6 Spacers, chairs, special joint special labour and treatment are measured only where they are not at the discretion of the contractor		
5 Special joint	2 Nominal size and type stated		nr				
6 Special labour/ treatment	1 Welding 2 Galvernising 3 Bitumen dipping 4 and the like		Item				
7 Fabric	1 Type stated	1 Width \leq 1.00 m 2 Width $>$ 1.00 m	m^2		M7 The area measured for fabric is laps over	C2 Fabric reinforcement is deemed to include laps, tying wire all cuttings & bending and spacers and chairs which are at the discretion of the contractor	
	2 Cutting	1 Raking 2 Circular	m		M8 Voids \leq 1.0 m^2 in area are not measured		

SECTION F4

PRE-CAST AND PRE-STRESSED CONCRETE

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
<p>The following information is shown either in location drawings under Section B Preliminaries or on further drawings which accompany the bills of quantities :</p> <p>a. Details of precast concrete members showing stressing arrangements</p> <p>b. Full details of anchorages, ducts, sheathing and vents</p> <p>c. The relative positions of concrete members</p> <p>d. The size of members</p> <p>e. The thickness of slabs</p> <p>f. The permissible loads</p>					D1 Concrete components which are cast other than in their final position shall generally be classed as precast concrete units		
CLASSIFICATION TABLE							
ORDINARY PRE-CAST CONCRETE							
1 Beams	1 Cross sectional dimensions stated	1 Length \leq 3.00m 2 and thereafter in 3m stages	nr	1 Reinforcement details stated 2 Cast in accessories details stated	M1 Pre-cast units are normally measured by number (nr). Where floor and wall units are of the same length they may be grouped together and measured in square meters stating cross sectional dimension and length range of each panel (unit)	C1 Pre-cast units are deemed to include moulds, reinforcements bedding, fixing temporarily supports, cast in accessories.	S1 Kind and quality of materials and mix details S2 Tests of materials and finished work. S3 Methods of compaction and curing S4 Bedding and fixing S5 Surface finishes
2 Columns							
3 Electricity posts							
4 Telecommunication posts							
5 Lintels							
6 Stair flights							
7 Floor units (nr)							

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
8 Wall units (nr)							
9 Windows & door frames	1 Dimensioned description		nr	1 Reinforcement details stated 2 Cast in accessories details stated	M2 Kerbs, Drains, culverts, paving slabs external to the building are measured in section X- External works		
10 Cills							
11 Vents							
12 Fins/ Louvers							
13 Copings							
14 Balustrades							
15 Treads							
16 Kerbs							
17 Drains							
18 Gutters							
19 Paving slabs							
20 Items extra over the units on which they occur	1 Fair ends 2 Angles 3 Stooling 4 Holes 5 Others, details stated						
PRE-CAST AND PRE-TENSIONED CONCRETE							
21 Columns	1 Cross-sectional dimensions stated	1 Length \leq 3 m. 2 and thereafter in 3m stages	nr	1 Reinforcement details stated 2 Cast in accessories, details stated	D2 Pre-cast pre-tensioned concrete is pre-cast and pre-tensioned in the moulds	C2 Pre-cast pre-tensioned units are deemed to include moulds, reinforcements, grooves and rebates erection fittings, fixing, temporary support, cast in	S6 Kind & quality of pre-tensioning materials, spacing and stresses S7 as S1 S8 as S2
22 Beams							
23 Purlins							

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24 Slabs			m ²			accessories and pre-tensioning	S9 as S3 S10 as S4
PRE-CAST AND POST-TENSIONED CONCRETE							
25 Beams	1 Cross-sectional dimensions stated	1 Length ≤ 3 m 2 and thereafter in 3m stages	nr	1 Reinforcement details stated 2 Cast in accessories, details stated		D3 Pre-cast post-tensioned concrete includes : a. Pre-cast and post-tensioned on the ground after casting b. Pre-cast in sections assembled in-situ and post-tensioned c. Pre-cast and post-tensioned after hoisting but capable of self support d. Pre-cast and post-tensioned after hoisting but requiring support until tensioned	S11 as S5 S12 Kind and quality of post-tensioning materials, spacing and stresses S13 Method of fixing and bedding
26 Columns							
27 Slabs			m ²				
28 Joints	1 Dimensioned description	1 Size of filling and sealants stated	m		M3 Alternatively joints may be given in the description of the pre-cast items in which they occur		S14 Kind and quality of materials
IN-SITU PRE-STRESSED WORK							
29 Concrete					M4 Concrete for in-situ component work is measured in accordance with sub-section F1 M5 The number and average lengths of sections of beams and other units		S15 Kind and quality of materials S16 Method of pre-stressing & tensioning

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
				not cast in one continuous operation stated			
30 Cores of ducts	1 Size and number stated	1 Length ≤ 3 m 2 and thereafter in 3m stages	m	1 Straight 2 Curved		D4 Cores of ducts is the formation and grouting or sealing of cores, ducts or grooves	S17 Details of any sheathing and grouting S18 Temporary supports
31 Items extra over cast in-situ pre-stressed component	1 Formation and grouting of air holes at ends and sides of cores or ducts		nr				
	2 Filling into jacking or anchor recesses and shear keys	1 Finish to exposed surfaces stated					
32 Formwork				M6 Formwork for in-situ pre-stressed component is measured in accordance with sub-section F2			S19 Kind and quality of formwork S20 Details of strutting and formwork remaining in position until pre-stressed concrete is mature S21 Special requirements for strutting and supports S22 Temporary restraints for tensioning
33 Items extra over formwork for pre-stressed	1 Temporary boxing forming recesses for anchorages	1 Dimensioned description	nr				
	2 Formwork for temporary	2 Cross-sectional					

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in-situ concrete	construction joints						
34 Reinforcement				M7 Reinforcement for in-situ prestressed component is measured in accordance with sub-section F3			S23 Kind and quality of stressing steel S24 Ultimate strength
35 Cables	1 Straight 2 Curved, radii stated	1 Type, size, length, type of central core or sheathing number of wires in each cable, all stated	nr			C3 Degreasing straightening, cutting to length, assembling, hoisting and fixing are deemed to be included	S25 Height of hoisting above ground
36 Tensioning	1 Sequence stated				D5 Tensioning includes provision of jacks, cutting the ends and extra material in waste	C4 Expendable items such as cones, wedges, anchor plates, spacers and the like are deemed to be included	

SECTION G

MASONRY WORKS

This Section of the standard covers the Method of Measurement of brick work, block work, stone work, accessories / sundry items for brick/ block/ stone walling of building works.

SECTION G1

BRICK WORK / BLOCK WORK

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION	
The following information is either on location drawings under B Preliminaries or on further drawings and specifications which accompany the bills of quantities : a.Plans of each floor level and principal sections showing the position of and the materials used in the walls b.Specification sections containing particulars of brickwork/blockwork c.Details of samples and tests required				M1 Brickwork and block work unless otherwise stated are measured on the centre line of the wall	D1 Brick work/block work shall be given separately as stated in D1 if insitu Concrete	C1 Brickwork and blockwork are deemed to include: a.Extra material for curved work	S1 Kind, quality and size of bricks/blocks S2 Type of bond	
				M2 No deductions are made for the following : a.Opening or voids $\leq 0.1 \text{ m}^2$ b. Strings,sills lintels,corbels and the like of one brick or block work or less	D2 Thickness stated is nominal thickness unless otherwise defined D3 Works deemed vertical unless otherwise described D4 Facework is any work in bricks or blocks finished fair	b.All rough and fair cutting c.Forming rough and fair grooves, throats,mortices, chases,rebates and holes,stops and mitres. d.Raking out joints to form key labours in eaves filling f.Labours in returns ends and angles g.Centering	S3 Composition and mix of mortar. S4 Type of pointing	
CLASSIFICATION TABLE								
1 Walls	1 Thickness stated	1 Vertical		m^2	1 Solid walls		D5 Battering walls are sloping walls with parallel sides	C2 Infill block work is deemed to include for infill material
		2 Battering			2 Skin of hollow walls			

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CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
8 Steps (nr)	1 Depth stated						
9 Arches (nr)	1 Height on face, thickness and width of exposed soffit and shape of arch stated		m	M4 Arches are measured the mean girth or length on face	D11 The width shall be the construction width		
10 Boiler seatings	1 Thickness stated		m ²			C3 Flue linings are deemed to include: a. Cutting to form seatings b. Cutting to form bends and walls around linings	
11 Flue linings							
12 Kerbs	1 Shape and size stated		m				
13 Coping							
14 Items extra over the work which they occur	1 Dimensioned description	1 Reveals 2 Angles 3 Intersections					
15 Ornamental bands & the like, type stated	1 Flush 2 Sunk 3 Projecting	1 Vertical, depth and width stated 2 Raking depth and width stated 3 Horizontal depth and width stated 4 Other details stated		1 Extra over the work in which they occur 2 Entirely of headers	D12 Radii stated are mean radii on face D13 Facework ornamental bands and the like are brick on edge bands moulded or splayed plinth cappings, moulded string		

					courses, moulded cornices and the like		
16 Facework quoins	1 Flush 2 Sunk, depth stated 3 Projecting, depth stated	1 Mean girth stated		1 Extra over the work in which they occur	M5 Facework quoins are measured on the vertical angle	D14 Facework quoins are formed with facing bricks which differ in kind or size from the general facings	S5 Method of jointing quoins to brick or blockwork
17 Facework sills 18 Facework thresholds 19 Face work copings 20 Facework steps	1 Dimensioned description	1 Vertical 2 Raking 3 Horizontal 4 Others, details stated					
21 Face work key blocks 22 Face work corbels 23 Face work and capitals bases to projections 24 Face work bases and capitals	1 Dimensioned diagram	1 Vertical 2 Raking 3 Horizontal 4 Others, details stated	nr	1 Extra over the work in which they occur			

SECTION G2

STONE WORK

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION	
<p>The following information is shown either on location drawings under B Preliminaries or further drawings which accompany the bills of quantities :</p> <p>a. Plan of each floor level and principal sections showing the position of and the materials used in the walls</p> <p>b. External elevations showing the materials used.</p>				<p>M1 Stone work is measured according to mean dimensions</p> <p>M2 No deductions is made for :</p> <p>a.Voids $\leq 0.1 \text{ m}^2$</p> <p>b.Strings,sills, lintels,corbels and the like</p> <p>M3 Curved work is so described</p>	<p>D1 The thickness stated is the nominal thickness except where defined otherwise</p> <p>D2 Work is deemed vertical unless otherwise described</p>	<p>C1 The work is deemed to include :</p> <p>a.Extra stone for joints</p> <p>b.Extra materials for curved work</p> <p>c.Mortices (others than linear item) holes,stops and arises</p> <p>d.Raking out joints to form key</p> <p>e.Labours in eaves filling</p> <p>f.Labours in returns,ends and angles</p> <p>g.Dressed margins to rubble work</p> <p>h.Levelling uncoursed work</p> <p>i.rough and fair square cutting</p> <p>j.centering</p>	<p>S1 Kind and quality of materials and for rubble walling, whether of random or squared stones, and where coursed the average height of the courses or maximum and minimum heights of diminishing course</p> <p>S2 Composition and mix of mortar</p> <p>S3 Type of pointing</p> <p>S4 Method of jointing together and fixing</p>	
1 Walls	1 Thickness stated	1 Vertical	m^2	1 Rubble stone work	M4 Building against other work and bonding to other work is measured where the other work is	D3 Battering walls are sloping walls with parallel sides D4 Tapering walls are walls of	C2 Battering and tapering walls are deemed to include the extra materials required	S5 Method of bonding to backing
	2 Building against other work, thickness stated	2 Battering		2 Dressed stone work (Ashlar)				
		3 Tapering ,one side						

2 Fire place and chimney stacks	3 Bonding to other work, thickness stated	4 Tapering both sides 5 Circular		3 Granite and marble 4 Others	existing or consists of differing material	diminishing thickness D5 Thickness stated for tapering walls is mean thickness D6 Walls include skins of hollow walls	C3 Work is deemed to include extra materials for bonding	
3 Isolated Columns 4 Attached Columns 5 Projections & isolated piers	1 Dimensioned description	1 Vertical 2 Battering 3 Tapering, one side 4 Tapering, both sides	m	1 Rubble stone-work 2 Dressed stone work 3 Granite and marble 4 Others		D7 Columns are walls whose length on plan is \leq four times their thickness except where caused by openings D8 Attached columns include attached piers and pilasters		
6 Lintels 7 Sills 8 Mullions 9 Transoms	1 Thickness and type stated			1 Faced one side 2 Faced both sides 3 Building against other work 4 Bonding to other work 5 Plain 6 Sunk 7 Circular				
10 Quoin stones 11 Jamb stones	1 Attached 2 Attached with different finish, type of finish stated 3 Isolated	1 Dimensioned description			M5 Quoins and jambs are measured on the vertical angle	D9 Attached stones are those attached to the same type of stone walling		

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
					D10 Isolated stones are those attached to another form of construction		
12 Corbel courses	1 Dimensioned description	1 Vertical		M6 Mouldings are given in the description of linear items	D11 Plain bands > 300 mm wide are measured as walling or facework		
13 Copings		2 Raking					
14 Hand-rails		3 Horizontal					
15 Cappings		4 Others, details stated					
16 Kerbs							
17 Cover stones							
18 Landings		1 Stones (nr)	nr				
19 Steps (nr)	1 Depth & width stated	1 Plain	m		D12 Spandrel steps are steps with slopping soffits		
20 Arches (nr)		2 Spandrel					
		1 Height of face, thickness and width of exposed soffit and shape arch stated	m	M8 Arches are measured the mean girth or length on face			
21 Rough raking or circular cutting	1 Thickness stated						
22 Fair raking or circular cutting							
23 Grooves	1 Size stated			M9 Grooves, throats and rebates are			

24 Throats 25 Rebates					only measured separately on superficial items of masonry and attached piers		
26 Carvings 27 Sculptures	1 Character of work stated	1 Component drawing	nr				C4 Carvings and sculptures are deemed to include : a. Selecting blocks of stone for size and quality b. Boasting for carving

SECTION H

WATER PROOFING

This Section of the standard covers the Method of Measurement of Water proofing of building works

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION	
The following information is shown either on location drawings under B Preliminaries or on further drawings which accompany the bills of quantities : a. A plan of each level indicating the extent of the work and its height above ground level and restrictions b. A section indicating the extent of tanking work				M1 The area measured is that in contract with the base and no deduction is made, for voids ≤ 0.1 m ²	D1 Water proofing includes : a. Mastic asphalt tanking/damp proof b. Liquid/power applied tanking/damp proof membranes c. Flexible sheet tanking/ damp proof membranes d. Rendering in water proof	C1 Work is deemed to include : a. Cutting to line, notching, bending and extra material for lapping b Working into recessed duct covers, shaped inserts, outlet pipes and the like c Work to falls and crossfalls	S1 Kind, quality and size of materials including underlays S2 Thickness and number of coats S3 Nature of base on which applied S4 Surface treatments	
CLASSIFICATION TABLE								
1 Tanking	1 Width ≤ 300 mm	2 Horizontal	m	1 Work subsequently covered	M2 Work carried at a height > 12.00 m above ground is measured in successive stages of 6.00 m thereafter	D2 Tanking and damp proofing in isolated areas are those not exceeding 1.00 m ² D3 Damp proofing includes associated cement, sand rendering or other screed associated with water proofing	C2 Work is deemed to include : a. Internal and external angles b. Angle fillets c. Arrises d. Edges e. Intersections on work to cross-falls	S5 Paper, felt, cork fibre board or other underlay in contact with asphalt and any reinforcement to asphalt stated
	2 Width > 300 mm							
2 Damp proofing	3 Isolated surfaces	3 Curved, radii stated	nr	3 Carried out at a height > 12.00 m above ground				
				4 Overhand work				
3 Skirtings	1 Girth ≤ 300 mm		m	1 Stepped			C3 Skirtings, coves, turn-ups are deemed to include edges, drips, arrises,	
4 Coves	2 Girth > 300 mm girth stated		m ²	2 Raking				

5 Turn-ups					angle fillets, turning ribs into grooves, stopped ends fair ends and extra materials for turning into grooves
6 Linings to gutters	1 Girth \leq 300 mm		m	1 Stepped	C4 Linings to gutters channels, valleys & covering to kerbs are deemed to include edges, arrises, internal angle fillets, tilting fillets, turning ribs into grooves, ends angles intersections, outlets, & extra materials for turning into grooves
	2 Girth > 300 mm girth stated		m ²	2 Raking	
7 Linings to channels					
8 Linings to valleys					
9 Covering to kerbs					
10 Collars around pipes, standards & the like	1 Size of member and length of collar stated		nr		D3 Collars include pipe sleeves
11 Linings to cesspools	1 Dimensioned description				C6 Linings to cesspools, sumps, manholes and the like are deemed to include arrises, internal angle fillets and outlets
12 Linings to sumps					
13 Linings to manholes					
14 Water bar	1 Width, thickness & type stated		m		

SECTION J

STRUCTURAL METAL WORKS FOR

STEEL IN FRAMED STRUCTURES/ ALUMINUM IN FRAMED STRUCTURES/ METAL WORK IN UNFRAMED STRUCTURES

This section of the standard covers the Method of Measurement of steel in framed structures, aluminum in framed structures and metal work in unframed structures of building works.

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
<p>The following information is shown either on location drawings under B Preliminaries or on further drawings which accompany the bills of quantities or in the specification :</p> <p>a. The position of the work in relation to other parts of the work and of the proposed buildings</p> <p>b. The types and sizes of structural members and their positions in relation to each other</p> <p>c. Details of connections or of the reactions, moments and axial loads, at connection points</p> <p>d. Any samples of tests required</p> <p>e. Any special trial shop assembly required</p>				<p>M1 Except as here in after provided steel work is measured in tonnes :</p> <p>M2 The mass of members other than plates or flats, shall be calculated from the overall lengths of the members with no deductions for splay-cut, mitred ends, notchings, and the like</p>			<p>S1 Kind and quality of materials</p> <p>S2 Details of performance in accordance with relevant specifications</p>
CLASSIFICATION TABLE							
1 Fabricating and erecting framed structures	1 Girders 2 Columns 3 Beams 4 Purlins	1 Plain 2 Compound, details of construction stated (nr)	t	1 Castellated 2 Tapered 3 Curved 4 Cambered	M3 The mass includes all components and fittings except fittings of different type and grade of material	D1 Fabrication includes all operations up to and including delivery to site	C1 Items for fabrication and erection measured by weight are deemed to include shop and site black bolts, nuts and washers
				M4 No allowance	D2 Erection		

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	5 Bracing 6 Rafters				is made for the mass of weld fillets, black bolts, nuts, washers rivets and protective coating	includes all operations subsequent to fabrication	
	7 Towers and built-up columns (nr)	1 Details of construction stated		1 Castellated 2 Tapered			
	8 Trusses and built-up girders (nr)	1 Details of construction stated		3 Curved 4 Cambered	M5 The mass of steel is taken for measurement as 785 Kg m ² per 100 mm thickness the mass of other metals is stated		
	9 Wires, cables, rods and bars (nr)						
	10 Anchor bolts	1 Type, lengths and diameter stated	nr				
	11 Base and base plates	1 Type and thickness stated	m ²				
2 Fabricating and erecting isolated structural members	1 Plain member	1 Use stated	t	1 Castellated		D3 Use is defined as J.1.8 inclusive	
	2 Built-up member	1 Use and details of construction stated		2 Tapered 3 Curved 4 Cambered	M6 The mass of built-up members is calculated as defined in M3 M7 Fixing bolts are measured in accordance with J.1.10.1	D4 Fixing bolts are bolts fixing an isolated structural member	
3 Filling hollow sections	1 Grout	1 Details stated	Item				C2 Filling Sections is deemed to include grouting /concreting under base and bearing plates or grillages and the like
	2 Concrete						

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
4 Surface preparation	1 Blast cleaning 2 Wire brushing 3 Others, details stated		m ²				S3 Type of preparation details of application and timing
5 Surface treatment	1 Galvanising 2 Sprayed metal coating 3 Protective painting 4 Others, details stated						
6 Localised protective coating	1 Type stated				D5 Localised protective coatings are localised applications to surfaces in contact with dissimilar metals and aggressive building materials		

SECTION K

METAL WORK

This Section of the standard covers the Method of Measurement of Metal work of building works excluding those measured under sections J, M and P.

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION	
<p>The following information is shown either on location drawings under B Preliminaries or on further drawings which accompany the bills of quantities:</p> <p>(a) The position of the work in relation to other parts of the work.</p> <p>(b) Component drawings</p>						<p>C1 Tie rods, bolts and other fastenings are deemed to be include with the measurement of metals</p>	<p>S1 Kind and quality of metal</p> <p>S2 Method of fixing or jointing where not at the discretion of the contractor</p>	
CLASSIFICATION TABLE								
1 Windows	1 Size and details of construction		nr	nr	M1 Standard sections are identified by catalogue No.	<p>C2 The work include</p> <p>a. Sub-frames, sills, & the like where part of the component</p> <p>b. Ironmongery where supplied with the component delivered</p> <p>c. Finishes where part of the component</p> <p>d. Glazing where supplied with the component</p>	<p>S3 Surface treatment as part of the production process</p> <p>S4 Bedding, jointing and pointing compound</p>	
2 Roof lights, sky lights, roof windows and frames								
3 Louvers								1 Fixed
4 Sun breakers								2 Adjustable
5 Sun shades								

CLASSIFICATION TABLE			MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
						e.Mechanical/ automatic operating equipment where supplied with the component f.Fixing & fastening
6 Doors & Gates 7 Rolled shutters & collapsible gates 8 Strong room doors	1 Size and detail of construction		1 Approximate weight stated	M2 Standard sections are identified M3 Approximate weight includes weight of frames M4 Each leaf of rolling shutter is counted as one door		C3 Doors are deemed to include fitting and hanging C4 Items include: a.Doors where supplied with the unit b.Ironmongery where supplied with the component
9 Special doors and windows		1 Cross reference to specification			D1 Special doors and windows include fire proof, thermal-proof, sound proof X ray proof, and the like doors and windows	c.Finishes where part of the component is delivered d.Glazing where supplied with the component
10 Grilles						e.Mechanical/ automatic operating equipment where supplied with the component f.Fixing & fastening
11 Composite item, type stated	1 Dimensioned description			M5 Where accessories such as trims, no sings, ironmongery and	D2 Composite items include : a.Staircases and	C5 Composite items are deemed to include :

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					the like are not included in a catalogue reference, they are measured in the appropriate work sections	ladders b.Landing and access walkways c.Balustrades & handrails d.Staircase newels e.Hatch doors where part of a loft ladder component.	a.linings,nosings, trims,sills and the like where part of the component b.Soffit lining, spandrel panels & the like where part of the component c.Ironmongery & operating gear where supplied with the item d.Finishes where part of the component as delivered e.Fixing,fastening, blockings,wedges bolts,cleats & the like.
12 Isolated balustrades	1 Details of construction stated		m	1 Curved,radii stated 2 Horizontal 3 Raking	M6 Isolated handrails are measured in appropriate sections	D3 Isolated balustrades are those which do not form an integral part of a staircase unit D4 Associated handrails are handrails of a material different from the balustrades with which they are associated	S5 Method of jointing or form of construction

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
14 Extra over the isolated balustrades or associated hand-rails in which they occur	1 Ramps 2 Bends 3 Ornamental 4 Opening portions details stated		nr				
15 Metal coverings and linings	1 Doors 2 Benches (nr) 3 Counter tops 4 Fascias 5 Ceilings 6 Others, details stated	1 Width \leq 300 mm 2 Width $>$ 300 mm	m m ²	1 Horizontal 2 Raking 3 Curved radii stated		C6 Bending, beading or wetting edges dressing into grooves or sinkings, dressing cover raised kerbs, nailing or screwing at edges witting or notching drilling and dressing around openings and like are deemed to be included with coverings and linings	
16 Floor duct cover	1 Steel plate duct covers 2 Patent flooring 3 Others, details stated	1 Width \leq 300 mm 2 Width $>$ 300 mm	m m ²	1 Horizontal 2 Raking 3 Circular radii stated	M7 Frames for floor ducts except those forming an intergral part of composite items (K11) are measured in accordance with the provision of Section J		S6 Details of lugs and similar attachments

17 Mat frames	1 Details of construction and size of the members stated		nr			D5 Mat frames are metal surrounds in mat recesses	S7 Details of frames, lugs and similar attachments
18 Supports	1 Tubular 2 Rectangular 3 Square or hollow 4 Others, details stated	1 Columns 2 Struts 3 Braces 4 Others, details stated				D6 Structural supports other than those in Section J	S8 Details of cap and base plates and similar attachments
19 Skirtings 20 Cornices 21 Angle beads	1 Type of metal and construction details stated		m			D7 Description to include fitted ends, mitred angles, corner pieces and the like	
22 Gratings 23 Inspection and Manhole covers 24 Access hatches	1 Type of metal and construction details stated		nr		M8 Gratings and covers are only measured in meters where to continuous channels and ducts	D8 Frames, lifting devices, fastenings and the like are included with gratings, covers and hatches	
25 Wire mesh screens 26 Metal fences	1 Construction details stated		m		M9 Wire mesh screen & metal frames include :- a) all supports b) Wire stands c) Selvedged edges		S9 Kind and quality of wire mesh and metal
27 Metal furniture	1 Lockers 2 Cabinets 3 Shelving units 4 Other details stated		nr				S10 Kind and quality of work

SECTION L

WOOD WORK

This Section of the standard covers the Method of Measurement of carpentry, joinery and ironmongery of building works excluding those measured under section N

SECTION L1

CARPENTRY

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
<p>The following information is shown either on location drawing under B Preliminaries or on further drawings accompany the bill of quantities</p> <p>a.The scope and location of the work</p> <p>b.The species of timber to be used</p> <p>c.The various classification of structural timbers and their location</p>					D1 All sizes are nominal sizes unless stated as finished sizes	<p>C1 The work is deemed to include labours on items of timber except as otherwise required</p> <p>C2 Timber shall be deemed to be fixed with nails except as otherwise stated</p>	<p>S1 Kind and quality of sawn timber</p> <p>S2 Method of fixing where not at the discretion of the contractor</p>
CLASSIFICATION TABLE							
1 floor framing	1 Plates 2 Bearers 3 Joists 4 Trimmers 5 Other type stated	1 Cross-sectional size stated	m	<p>M1 The following allowances for joints > 6m in continuous lengths :</p> <p>a.Twice depth of timber for each scarfed joint</p> <p>b.200 mm for other joints of timber for each joint</p>		<p>C3 Cleats,packers tapered pieces of timber & the like are deemed to be included with structural timbers</p>	<p>S3 Preservative treatments stated</p> <p>S4 Method of jointing form of construction where not at the discretion of the contractor</p>
2 Walling	1 Struts			M2 Noggings are			

framing	2 Studs 3 Noggings 4 Other type stated			measured over the studs		
3 Ceiling framing	1 Joists 2 Beams 3 Hangers 4 Trimmers 5 Others, type stated					
4 Roof framing	1 Struts 2 Rafters 3 Purlins/ Bearers 4 Ridges 5 Hips 6 Reepers 7 Others, type stated					
5 Roof trusses	1 Dimensioned description		nr		D2 The description should include the shape, span, rise and height above ground for hoisting and fixing	C4 The work is deemed to include webs, gussets and the like
6 Joist strutting	1 Herringbone depth of joist stated 2 Block, depth of joist stated		m	M3 Strutting is measured over the joists		
7 Straps 8 Nail plates 9 Metal connector 10 Bolts	1 Dimensioned description		nr	M4 The length of a bolt is measured overall the head	D3 Bolts include heads, nuts and washers	C5 Work is deemed to include all labour in fabricating and fixing C6 Work is deemed to include all accessories

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
11 Items extra over the work in which they occur	1 Exposed rafters		m				
	2 Decorative work		nr				

SECTION L2

JOINERY

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION	
<p>The following information is shown either on location drawings under B Preliminaries or on further drawings which accompany the bills of quantities</p> <p>a The scope and location of the work</p> <p>b The species of timber to be used</p>				<p>M1 No deduction is made for voids $\leq 0.1 \text{ m}^2$</p> <p>M2 Work to ceilings over 3.50 m above floor except in staircase areas is so described stating the height in further stages of 1.5 m</p>	<p>D1 All sizes are finished sizes unless otherwise stated</p>	<p>C1 The work is deemed to include all labours on items of timber except as otherwise required</p>	<p>S1 Kind and quality of wrot timber</p> <p>S2 Method of fixing where not at the discretion of the contractor</p> <p>S3 Preservative treatments stated</p>	
CLASSIFICATION TABLE								
1 Walls	1 Width > 300 mm	1 Dimensioned description	m ²	1 Sloping 2 Curved, radii stated	M3 Width is measured from face to face	<p>D2 Walls include jambs and cills to openings and recesses in walls and panelled walls</p> <p>D3 Ceilings include soffits to openings and recesses in walls, all faces of recesses ceiling</p> <p>D4 Sloping is defined as sloping both > 10° from horizontal and > 10° from vertical</p>	<p>C2 Panelled wall-linings, partitions and spandrel framing are deemed to be included with walls</p>	<p>S4 Surface treatment stated</p> <p>S5 Details of cover and jointing strips and cover mouldings</p> <p>S6 Limits on the planing margin's and if deviation from the stated sizes is not permitted</p>
2 Floors	2 Width \leq 300 mm		m					
3 Ceilings								
4 Roofs								
5 Isolated columns	1 Girth < 300 mm		m ²					
6 Isolated beams	2 Girth \geq 300 mm		m					
7 Projections								

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
8 Holes	1 Size stated		nr			D5 Holes are those for pipes, standards and the like	
9 Items extra over the work in which they occur	1 Access panels 2 Doors in panelled partition	1 Dimensioned description					
10 Gutter boards	1 Width > 300 mm	1 Dimensioned description	m ²	M4 Gutter boards and sides are each measured overall as individual components but grouped together	D6 Gutter boards includes sides D7 Fascia boards include verge boards		
11 Fascia boards	2 Width ≤ 300 mm	1 Dimensioned overall Cross-sectional description	m				
12 Eaves & verges soffit boards							
13 Skirtings	1 Cross-sectional description				D8 Skirtings include picture rails, dado rails and the like		
14 Architraves							
15 Window boards							
16 Hand rails							
17 Isolated shelves		1 Plain 2 Tongued and grooved			D9 Isolated shelves includes work-tops, seats and the like		

18 Doors	1 Ordinary	1 Dimensioned and detailed description with area in parenthesis	nr	M5 Sizes of sub-frames, beads and the like to be stated	D10 The description to include particulars of mullions, transoms, glazing bars, the number of sashes stating whether double hung hopper, casement and the like D11 Special doors and windows include fireproof, thermal proof and sound proof and the like doors and windows	C3 Frames & sub-frames are deemed to be included with openings unless otherwise stated	
19 Windows	2 Special						
20 Others details stated							
21 Stairs	1 Detailed description		nr		D12 Description to include rise width, number of treads, rises and sizes of various members	C4 Landings, strings and the like deemed to be included	S7 Method of jointing at discretion of the contractor
22 Newels (nr)	1 Detailed description						
23 Balustrades (nr)	1 Detailed description						
24 Items extra over balustrades and hand-rails	1 Ramps 2 Bends 3 Mitres 4 Scrolls						
25 Louvre blades (nr)	1 Detailed description						
			m	M6 Louvre blades may also be alternatively included with the description of the frame work L2:19:2:1			

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
26 Tracery work	1 Shaped	1 Detailed description	nr				
	2 Tapered pieces						
27 Sundry Items	1 Slatted shelving	1 Overall width of shelf, size spacing of slats & ledge stated	m				
	2 Wall bearers	1 Cross-sectional size stated					
	3 Pipe casings	1 Detailed description					
28 Fittings to design	1 Cupboards	1 Detailed description stated					
	2 Benches						
	3 Book cases						
	4 Counters						
	5 Blackboards						
	6 Others, details stated						
						C5 Ironmongery including pulls, locks, catches, hinges, sliding or hanging or hanging devices and the like are deemed to be included	S8 Relevant specification and drawing particulars

SECTION L3

IRONMONGERY

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
<p>The following information is shown either on drawings under B Preliminaries or on further drawings which accompany the bills of quantities :</p> <p>a. The position of the work in relation to other parts of the work</p> <p>b. The types and or catalogue numbers of particular ironmongery</p>				<p>M1 All ironmongery are enumerated</p> <p>M2 Where P C sums are given for the supply only of ironmongery the various types of fittings to be fixed are enumerated</p>	<p>D1 Work in this sub-section covers ironmongery to :-</p> <p>a. Doors</p> <p>b. Windows</p> <p>c. Other sundry items</p>	<p>C1 Fixing with screws to match is deemed to be included with the items</p> <p>C2 Preparing timbers to receive ironmongery is deemed to be included with the items</p>	<p>S1 Kind and quality of Ironmongery</p> <p>S2 Surface finish</p> <p>S3 Constituent parts of unit (or set)</p>
CLASSIFICATION TABLE							
1 Door furniture	1 Hinges 2 Bolts 3 Locks 4 Latches 5 Catches 6 Closers 7 Floor springs 8 Sliding folding or overhead door gear 9 Push bars and plates 10 Pull rings	1 Dimensioned description	nr				<p>S4 Nature of the background to which items are to be fixed</p> <p>S5 Where master key system is required, it shall be stated</p>

CLASSIFICATION TABLE			MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
	11 Pull bars and handles 12 Kick plates 13 Haps and staples 14 Others, details stated					
2 Window furniture	1 Hinges 2 Bolts 3 Fasteners 4 Pulls 5 Stays 6 Others, details stated	1 Dimensioned description				
3 Sundries	1 Door stops 2 Shelf brackets 3 Curtain rails 4 Others, details stated					

SECTION M

CLADDINGS

This Section of the standard covers the Method of Measurement of plastic glazed walling, structural glass walling, curtain walling and asbestos cement/ metal / plastics sheet cladding of building works excluding roof covering measured under section P

INFORMATION PROVIDED					MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
<p>The following information is shown either on location drawings under B Preliminaries or on further drawings which accompany the bills of quantities :</p> <p>a. The scope and location of the work</p> <p>b. Component drawings</p> <p>c. The extent of the work and its height above ground level</p>							C1 Work is deemed to include raking cutting ,curved cutting	S1 Kind quality and thickness of materials
CLASSIFICATION TABLE								
PLASTICS GLAZED WALLING/STRUCTURAL GLASS WALLING								
1 Walling	1 Propriety product stated where specified	1 Site drilling, background	m ²	1 Flat 2 Sloping 3 Curved,radii stated	M1 No deduction is made for voids ≤ 0.10 m ² M2 Glazing is measured over bars		C2 Work is deemed to include securing to wood unless otherwise stated	S2 Type finish length and spacing of glazing members S3 Nature, thickness,spacing of structural supports
2 Items extra over the walling in which they occur	1 Doors 2 Windows 3 Fixed louvers 4 Adjustable louvers 5 Others,details stated	1 Dimensioned description	nr	1 Control gear to single unit, type,method of fixing and distance vertically and horizontally from unit stated				

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
				2 Control gear to number of units type, method of fixing and distance vertically and horizontally from units stated			
3 Weatherings, & flashings & fixing members at tops, bottoms and sides where part of the component	1 Preformed, gauge stated 2 Extruded, thickness stated	1 Site drilling, background stated	m				C3 Stop ends, mitres and corners are deemed to be included
CURTAIN WALLING							
4 Walling	1 Dimensioned description		m ²	1 Flat 2 Sloping 3 Curved, radii stated	M3 No deduction is made for voids ≤ 0.10 m ² M4 Infill panels are measured over all framing	D1 Curtain walling comprises non load bearing wall of wood or metal framing, fixed as an integrated assembly, complete with windows and opening lights, glazing and infill panels	C4 Curtain walling is deemed to include all cleats brackets, bolts and fixing C5 Items include : a. Doors where supplied with the unit b. Architraves, trims and the like where part of the component c. Ironmongery where supplied with the component d. Fixing and fastenings
5 Items extra over the curtain walling	1 Infill panels 2 Perimeter 3 Angle 4 Closer	1 Type and thickness stated 1 Heads 2 Sills 3 Abutments 1 Fire stops 2 Partition closer	m	1 Irregular 2 Horizontal 3 Sloping 4 Vertical 5 Curved, radii stated		D2 All sizes are nominal sizes unless stated as finished sizes	

		3 Angle closer 4 Plaster stop					e.Finishes where part of the component as delivered	
	5 Opening lights 6 Doors	1 Dimensioned description	nr			D3 Opening lights include opening gear as appropriate	f.Mastic/sealants unless executed by a specialist	
ASBESTOS CEMENT/ METAL/ PLASTICS SHEET CLADDING					M5 No deduction made for voids $\leq 0.10 \text{ m}^2$			S4 Nature, thickness and spacing of structural supports
6 Flat sheet cladding	1 Width $\leq 300 \text{ mm}$		m	1 Vertical				
	2 Width $> 300 \text{ mm}$		m^2	2 Sloping				
7 Profiled sheet cladding				3 Curved, radii stated				
8 Ventilators		1 Dimensioned description	nr				C6 Work is deemed to include forming voids	
9 Items extra over sheet cladding	1 Translucent sheets							
	2 Sheet with louvre blades							
10 Holes	1 Area $\leq 0.1 \text{ m}^2$					D4 Holes are those for pipes standards and the like		
	2 Area $> 0.1 \text{ m}^2$							

SECTION N

PARTITIONS / LININGS / SUSPENDED CEILINGS

This section of the standard covers the Method of measurement of plaster board dry lining and fixed partitions, inner walls, linings, demountable partitions, cubical partitions, suspended grid system ceilings of building works.

INFORMATION PROVIDED	MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION																			
<p>The following information is shown either on location drawings under B Preliminaries or on further drawings which accompany the bills of quantities:</p> <p>a. The scope and location of the work</p> <p>b. The services located with the lining or partition</p>	<p>M1 Work in staircase areas and plant rooms are given separately</p> <p>M2 Work to ceilings and beams over 3.50 m above floor (measured to ceiling level in both cases), except in staircase, is so described stating the height in further 1.50 m stages</p> <p>M3 No deductions is made for voids < 0.1 m²</p>	<p>D1 Work is deemed internal unless described as external</p>	<p>C1 Work is deemed to include :</p> <p>a. Fair joints</p> <p>b. Additional labour for overhead work</p> <p>c. Plaster for touching up</p> <p>d. Trims and beads</p> <p>C2 Pattered work is deemed to include all extra work involved</p>	<p>S1 Kind, quality and thickness of sheeting and components</p> <p>S2 Method of construction</p> <p>S3 Layout and treatment of joints</p> <p>S4 Insulation to limit sound transmission</p> <p>S5 Surface applications for part of dry lining</p> <p>S6 Methods of jointing composite panels</p>																			
CLASSIFICATION TABLE																							
PLASTER BOARD DRY LINING AND FIXED PARTITIONS/ INNER WALLS/ LININGS																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">1 Partitions</td> <td style="width: 10%;">1 Thickness stated</td> <td style="width: 10%;">1 Boarded one side</td> <td rowspan="2" style="width: 10%; text-align: center; vertical-align: middle;">m²</td> <td style="width: 10%;">1 Vertical</td> </tr> <tr> <td></td> <td></td> <td>2 Boarded both side</td> <td>2 Curved, radii stated</td> </tr> <tr> <td>2 Linings</td> <td>1 Walls</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>2 Ceilings</td> <td></td> <td></td> <td></td> </tr> </table>	1 Partitions	1 Thickness stated	1 Boarded one side	m ²	1 Vertical			2 Boarded both side	2 Curved, radii stated	2 Linings	1 Walls					2 Ceilings				<p>M4 No allowance is made for lapped joints</p>	<p>D2 Reveals and soffits of openings and recesses in linings > 600 mm are defined as to walls, beams or columns</p> <p>D3 Linings are</p>	<p>C3 Partitions linings are deemed to include the following where part of the partition system, where not part of the partition system, they are measured in</p>	
1 Partitions	1 Thickness stated	1 Boarded one side	m ²		1 Vertical																		
		2 Boarded both side		2 Curved, radii stated																			
2 Linings	1 Walls																						
	2 Ceilings																						

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	3 Beam faces (nr) 4 Column faces (nr)	1 Total girth ≤ 600 mm 2 and thereafter in 600 mm stages	m		those which do not form part of partition system and exclude framing	accordance with appropriate work section rules : a. Head and sole plates b. Studs, stiffening sections, firings and channels c. Metal resilient bars d. Jointing bars e. Insulation and barriers f. Fillets, battens and the like	
3 Extra over the work in which they occur	1 Access panels	1 Dimensioned description	nr				S7 Type of panels
DEMOUNTABLE PARTITIONS							
4 Partitions	1 Thickness stated	1 Factory finish 2 Site applied finish	m ²	1 Vertical 2 Curved, radii stated	M5 Factory applied finishes and site applied finishes are only measured where not at the discretion of the contractor	C4 Partitions are deemed to include all integral components, holes and the like performed at factory	S8 Complex integral services S9 Details of ironmongery, glass linings and the like
5 Openings extra over the parti- tions in which they occur	1 Doors 2 Windows 3 Glazed panels 4 Access panels 5 Others, details stated	1 Dimensioned description	nr		D4 Openings is a general term for breaks in the general constructi- ons of partitions and includes the components filling the openings	C5 Openings are deemed to include additional integral components C6 Openings are deemed to include ironmongery, glass linings and the like	

CLASSIFICATION TABLE					MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
CUBICAL PARTITIONS								
6 Cubical partitions set	1 Dimensioned diagram		nr			D5 Cubical partitions include doors, ironmongery and the like	C7 Cubical partitions are deemed to include framing, stiffening, connecting and fixing devices, supporting legs and brackets	S10 Method of fixing S11 Method of bedding, jointing and pointing
SUSPENDED GRID SYSTEM CEILINGS								
7 Ceilings	1 Depth of suspension stated	1 Thickness of lining and method of fixing system to structure stated	m ²	1 Patterned, details stated 2 Sloping linings details stated 3 Curved, radii stated 4 Trims at regular intervals within area of suspended ceiling, details stated 5 Drops of recesses	M6 Soffit linings on battens and the like fixed direct to underside of slab are measured elsewhere in the relevant sections M7 The area measured is that on the exposed face including vertical sides of recesses & drops M8 The depth of suspension is measured from the main structural soffit to the lining	D6 Integral fittings occur where the fittings are designed and incorporated into the ceiling structure	C8 Suspended ceilings etc are deemed to include : a. Working over and around obstructions b. Support work and accessories for fittings c. Suspension and framed members d. Cutting C9 Work incorporating integral fittings is deemed to include additional hangers, framing and the like	S12 Size of panels and strips S13 Construction of framing and suspension system S14 Services in the suspended ceiling void S15 Services in the suspended ceiling void S16 Integral ventilating, lighting and fire prevention fittings
8 Items extra over the lining in which they occur	1 Access panels 2 Others	1 Dimensioned description 2 Details stated	nr				C10 Access panels are deemed to include edge trim and fixings	
9 Bridgings	1 Span stated		m	1 Support to light fittings and the like	M9 Bridging is measured where widths of trunking in the ceiling space obstruct the standard grid		C11 Bridging is deemed to include additional fixings	

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10 Fittings		1 Dimensioned description	nr				
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SECTION P

ROOF COVERING/ ROOF PLUMBING

This section of the standard covers the Method of Measurement of build-up felt and mastic roof covering, title roof covering, sheet roof covering and roof plumbing of building works

INFORMATION PROVIDED			MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
The following information is shown either on location drawings under B Preliminaries or on further drawings which accompany the bills of quantities : a. The extent of the roofing work and its height above ground level			M1 Curved work is so described with radii stated		C1 Work is deemed to include raking cutting, curved cutting	S1 Kind and quality of materials, including underlays S2 Nature of base, on which applied
CLASSIFICATION TABLE						
BUILT-UP FELT AND MASTIC ROOF COVERING			M2 The area measured is that in contact with the base and no deduction made for void $\leq 0.1 \text{ m}^2$		C2 Work is deemed to include: a. Cutting to line b. Cutting, notching bending and extra material for lapping the underlay c. Work to falls and crossfalls	S3 Method of application and number of layers (coats)
1 Built-up felt roof covering	1 Width $\leq 300 \text{ mm}$ 2 Width $> 300 \text{ mm}$	m m ²	1 Curved radii stated			
2 Mastic asphalt roof coverings						
3 Surface treatment	1 Pebbles 2 Aluminum paint 3 Tiles 4 Others, details stated					
4 Abutments	1 Girth stated	m	1 Raking 2 Stepped		C3 Labour and material in turning ups or turn-downs, cutting ends, angles intersections, bending, turning into grooves,	
5 Eaves						
6 Verges						
7 Skirtings						

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8 Ridges					wedging, dressing, trimming and dressing over angle fillets are deemed to be included with the items
9 Hips					
10 Flashings					
11 Aprons					
12 Gutter linings					
13 Vertical angles					
14 Valleys					
15 Internal angle fillets	1 Dimensioned description			M3 Internal angle fillets are only measured with asphalt work	C4 Internal angle fillets are deemed to include ends and angles
16 Collars around pipes, standards & the like	1 Size of pipe and length of collar stated	nr			D1 Collars include pipe sleeves
17 Linings to sumps	1 Dimensioned description				
18 Linings to outlets and dishing to gullies					

CLASSIFICATION TABLE					MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
TILE ROOF COVERING					M4 Tile roof covering is measured to net area to be covered including a. Under ridge and hip coverings b. flashings and the like		C5 Coverings are deemed to include work in forming voids $\leq 0.10 \text{ m}^2$ other than holes	S4 Minimum laps S5 Spacing of battens and counter battens
19 Tile roof covering	1 Clay tiles 2 Asbestos cement tiles 3 Cement sand tiles 4 Metal tiles 5 Plastic tiles 6 Others	1 Pitch and kind of tile stated	m^2	1 Tile not on battens 2 Tiles on roof coverings				
20 Abutments 21 Eaves 22 Ridges 23 Hips 24 Verges 25 Angles			m	1 Raking 2 Curved, radii stated		C6 Work is deemed to include cutting bedding painting ends, angles and intersections	S6 Method of forming	
26 Skylights 27 Ventilators 28 Others details stated	1 Glass 2 Plastic	1 Dimensioned description	nr					
29 Holes	1 Area $\leq 0.1 \text{ m}^2$ 2 Area $> 0.1 \text{ m}^2$				D2 The description to include : a. bedding and pointing c. Cutting mitred hips of angles on both sides	C7 Work is deemed to include forming voids		
SHEET ROOF COVERING					M6 No deduction is made for voids $\leq 0.1 \text{ m}^2$		C8 Sheet roof coverings are deemed to include : a. Work to falls and cross falls	S7 Method of fixing S8 Details of laps drips, water beads, rolls,
30 Flat sheet covering	1 Metal sheet 2 Asbestos cement sheets 3 Plastic	1 Pitch and kind stated	m^2					

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CLASSIFICATION TABLE					MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
ROOF PLUMBING					M7 Gutters are measured over all fitting and branches		C11 Gutters are deemed to include joints in the running length and brackets	S9 Type, material and spacing of brackets
43 Gutters	1 Straight 2 Curved, radii stated	1 Type, material nominal size, method of jointing and method of fixing supports stated	m	1 Background and method of fixing stated	M8 Concrete gutters are measured in section F			
44 Items extra over the gutter in which they occur	1 Special joints and connections	1 Type and method of jointing stated	nr	1 Nominal size stated where different from gutter in which joint or connection occurs		D6 Special joints and connections are joints which differ from those generally occurring in the running length or are connections to existing gutter or gutters of different profile or material		
	2 Fittings	1 Type, material stated		1 Method of jointing stated where different from gutter in which fittings occur	M9 Fittings which are reducing are measured extra over the largest gutters in which they occur	D7 Fittings are stop ends, angles outlets, sumps and the like	C12 Cutting and jointing gutters to fittings is deemed to be included	
45 Down pipes	1 Straight 2 Curved, radii stated	1 Type, material nominal size, method of jointing and method of fixing supports all stated	m	1 Background and method of fixing stated 2 In ducts 3 In floor chases	M10 Down pipes are measured over all fittings junctions and offsets		C13 Down pipes are deemed to include brackets joints and cuttings and the like	S10 Type, material and spacing of brackets
46 Items extra over the down pipes in	1 Fittings	1 Type stated	nr	1 Nominal size stated		D8 Fittings are bends, junctions, offsets, shoes and the like		

which they occur	2 Joints and connections	1 Type , method of joint and connection stated	1 Nominal size stated where different from down pipe in which joint or connection occurs	D9 Joints and connections to down pipes are connections of down pipes to drains and joints between differing materials		
47 Sumps in flat roofs	1 Dimensioned description	1 Type, material and method of fixing and jointing	1 Connection to down pipe and for any required gratings, covers stated			S11 Where propriety brands are used it shall be so stated

SECTION Q

PLUMBING/ SANITARY INSTALLATIONS

This Section of the standard covers the Method of Measurement of plumbing/ sanitary installations of building works

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION	
<p>The following information is shown either on location drawings under B Preliminaries or on further drawings which accompany the bills of quantities :</p> <p>a.Scope and location of the work</p> <p>b.Details of pipe line</p> <p>c.Particulars of any regulations,rules,by-laws with which the installations are required to comply</p> <p>d.The use to which the piping is being put</p>				<p>M1 Work outside the boundary of the property is identified separately</p> <p>M2 The work in each different type of installation is measured separately as follows :</p> <p>a.Cold b.Hot water installation c.Fire service installation d.Gas installation e.Drainage above ground</p>	<p>D1 Finishes and surface treatments exclude insulation and decorative finishes which are measured in other sections</p> <p>D2 Diameter of pipes shall mean the nominal diameter</p> <p>D3 Nominal diameter of pipes shall mean :</p> <p>a.For upvc pipes nominal diameter as per table 1 of SLS 147 second revision 1993 b.For pipes of other material the internal diameter</p>	<p>C1 Providing everything necessary for jointing is deemed to be included</p> <p>C2 Patterns,moulds templates and the like are deemed to be included</p>	<p>S1 Specified codes of practice and regulations</p> <p>S2 Kind and quality of materials</p> <p>S3 Tests with which materials must comply</p> <p>S4 Finishes or surface treatments applied off site</p>	
CLASSIFICATION TABLE								
1 Pipes	1 Type,material nominal diameter and method of fixing supports all stated	2 In ducts 3 In trenches 4 In floor screeds 5 In insitu concrete 6 Others,details stated	m	1 Straight 2 Curved radii stated	M3 Pipes are measured over all fittings and branches along the centre line of bends,junctions tees and fittings	D4 Lagging and work of similar nature shall be included in the descriptions of the items concerned	C3 Pipes are deemed to include joints necessary solely for lengthening purposes for pipes ≤ 50 mm diameter	S5 Method of jointing pipes
<p>C4 Pipes are deemed to include all</p>								

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						labour excluding made bends C5 Pipes are deemed to include builder's work in connection	
2 Items extra over the pipes in which they occur	1 Fittings	1 Elbows 2 Bends 3 Tees 4 Junctions 5 Plugs 6 Reducers 7 Others, details stated	nr		M4 Fittings which are reducing are measured extra over the largest pipe in which they occur	D5 Fittings are those used for pipes > 50 mm diameter	C6 Cutting and jointing pipes to fittings is deemed to be included
	2 Special joints and connections	1 Type and method of jointing stated		1 Nominal size stated where different from pipe in which joint or connection occurs		D6 Special joints and connections are joints which differ from those generally occurring in the running length or are connections to pipes of different profile or material connections to existing pipes or to equipment appliances or ends of flue pipe	
3 Pipe ancillaries	1 Gullies 2 Outlets 3 Traps 4 Flap valves 5 Gratings 6 Others, details stated	1 Type, material nominal size type of pipe, number and method of fixing any supports stated		1 Background and method of fixing stated 2 In ducts	M5 Gratings may alternatively be given in the description of the enumerated item to which they relate		C7 Cutting and jointing pipes to ancillaries is deemed to be include
4 Pipe sleeves through walls and ceilings, floor	1 Length stated	1 Type, material and nominal size of pipe stated		1 Method of fixing and type of packing stated			

CLASSIFICATION TABLE			MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION	
5 Fixtures, appliances and equipment	1 Type, material size & pattern, capacity and method of fixing	1 Ancillaries provided with fixtures, appliances and equipment, details stated		M6 Hot water units, hydrotherms pumps, gauges and appliances or equipments are measured separately M7 Mirrors exceeding 0.5m ² are measured in section V.9	D7 Fixtures, appliances and equipment include: Baths, shower trays basins, sinks, mirrors, towel rails, laundry tubs, WC suits, squatting pans, urinals bidets, flushing cisterns drinking fountains shower roses, and the like But exclude hot water units, hydrotherms, pumps and gauges	C8 Fixtures deemed to include standard fittings	S6 Standard fittings to be specified
6 Hot water units	1 Cross-reference to specification	1 Ancillaries provided, details stated					
7 Hydrotherms 8 Pumps 9 Gauges							
10 Water tanks 11 Sumps 12 Trays	1 Type, size and pattern, capacity and method of fixing stated	1 Cross-reference to specification	1 Ancillaries provided details, stated	M8 Insitu water tanks, sumps & trays are measured under appropriate sections			
13 Cocks 14 Valves 15 Fire	1 Type, size and method of jointing stated	1 Nominal size stated where different from pipe in which joint or		M9 Short lengths of chromium plated or other special piping connected to be included in		C9 Cutting and jointing pipes to taps, cocks, valves fire hydrants and horse reels are	

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Hydrants		connection occurs			the description of the cocks		deemed to be included
16 Horse reels							
17 Taps							
18 Meters	1 Type and method of jointing stated	1 Cross-reference to specification			1 Ancillaries provided, details stated		
19 Connecting to mains	1 Details stated				M10 Connecting to local authority's main is only measured where it is executed by the contractor Work by statutory authorities is measured in Section B		C10 The work is deemed to include all necessary excavation and reinstatement
20 Testing and commissioning	1 Installation stated	1 Stage tests (nr) listed and purpose stated 2 Others, details stated	Item				C11 Provision of water for testing is deemed to be included
TRENCHES PITS FOR PIPE WORK							
21 Excavating trenches	1 Pipes \leq 100 mm nominal size 2 Pipes > 100 mm - 200 mm nominal size 3 Pipes > 200 mm nominal size, stated	1 Average depth of runs \leq 250 mm 2 and thereafter in 250 mm stages	m	1 Backfilling with special materials, details stated 2 Commencing level stated 3 Disposal of specified locations, details stated 4 Surface treatment, details stated	M11 The width of the trench to be taken is the nominal size of the pipe plus 400 mm. The measurement is subject to minimum width of 500 mm M12 Excavating trenches below ground water level is measured where the ground water level is above the	D8 Backfilling with special materials shall mean where selected or treated excavated materials or imported materials are used	C12 Excavating trenches are deemed to include : a. earthwork support b. consolidation of trench bottoms and finishing to required gradient c. backfilling with and compaction of excavated materials d. disposal of surplus excavated materials

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION	
					bottom of the trench		e.trimming excavation f.special protection of pipes	
22 Items extra over excavating trenches irrespective of depth	1 Breaking out existing materials	1 Rock	m ³		M13 The measurement of extra over items is based on the width of the beds in the trenches.where there are no beds the width to be, taken is the nominal size of the service plus 400 mm. In both cases measurement is subject to minimum width of 500 mm	D09 Rock is any material which is of such a size or position that it can only be removed by wedges, special plant or explosives		
	2 Breaking out existing hard pavings, thickness stated	1 Concrete 2 Reinforced concrete 3 Brick work/ block work or stone work 4 Coated macadam or asphalt 5 Others	m ²	1 Reinstating to match existing				
	3 Lifting turf for preservation	1 Method of preserving details stated						
	4 Next to existing live services	1 Type and number on services stated	m		M14 To be measured where precautions are specifically required			D10 Retaining service is a precaution which is specially required
	5 Around existing live services crossing trench							
	6 Excavating below water level		m ³		M15 Excavating trenches below ground water level to be measured where the ground water level is above the bottom of the trench			
	7 Excavating below ground water level							
							S7 Nature of special requirement	

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SECTION R

MECHANICAL INSTALLATIONS

This section of the standard covers the method of measurement of transport systems, equipments pertaining to ventilation, air-conditioning, heating, cooling & refrigeration systems, ducting and thermal insulation of building works.

INFORMATION PROVIDED					MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
The following information is shown either on location drawings under B Preliminaries or on further drawings which accompany the bills of quantities: a. The scope and location of the work, including extent of work in motor, machinery or plant rooms					M1 Work is classified in accordance with the following work sections and given under an appropriate section headings 1 Transport systems 2 Equipments 3 Ducting 4 Thermal insulation		C1 Provision of tools and spares as specified is deemed to be included C2 Training of personnel in operation of completed installation	S1 Such information as is appropriate to the procurement, design execution, supply and/or manufacture of the item and its incorporation in the works
CLASSIFICATION TABLE								
TRANSPORT SYSTEMS								
1 Lifts	1 Component drawing reference	1 Cross-reference to specification	nr					S2 Where the brand name is specified, an option shall be given for an equivalent
2 Escalators	2 Type, size, pattern capacity, loading length of floors served as appropriate all stated							
3 Hoists								
4 Cranes								
5 Mechanical conveyors								
6 Other lifting devices								
7 Builder's work in	1 Installation stated		Item	1 Formed during construction,	M2 Builder's work in connection is			

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connection				details stated	only measured if not included elsewhere		
8 Identifi- cation where not provided with equipment	1 Plates 2 Labels 3 Arrows,symbols letters and numbers 4 Others,details stated	1 Type,size and method of fixing stated	nr	1 Details of engraving stated			
9 Testing and commissio- ning	1 Installation stated	1 Preparatory operations, details stated 2 Stage tests (nr) listed and purpose stated	Item	1 Attendance required 2 Instruments to be provided		C1 Provision of electricity and other supplies is deemed to be included C2 Provision of test certificate is deemed to be included	
EQUIPMENT							
10 Ventilati- on and air conditio- ning units	1 General supply/ extract 2 Toilet extract 3 Kitchen extract 4 Car parking extract 5 Smoke extract/ smoke control 6 Safety cabinet 7 Fume extract 8 Anaesthetic gas extract 9 Dust collection 10 Variable air volume air conditioning 11 Multi-zone air conditioning 12 Fan coil air conditioning 13 Hybrid system air conditioning	1 Cross-reference to specification ----- 1 Type,size and pattern,rated duty,capacity, loading as appropriate and method of fixing all stated	nr	1 Ancillaries provided with equipment, details stated 2 Integral controls or indicators, details stated 3 Supports, anti-vibration mountings, insulation provided with equipment, details and methods of fixing stated 4 Background stated		C3 Providing every thing necessary for jointing is deemed to be included C4 Plates,discs and labels for identification provided with the equipment are deemed to be included	S3 Specific codes of practice and regulations S4 Kind and qual- ity of material S5 Tests with which materials and equipment must comply S6 Finishes or surface treatments applied on site or off-site

CLASSIFICATION TABLE		MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
	14 Free standing air conditioning units 15 Window/ wall air conditioning units 16 Humidifiers 17 Dehumidifiers 18 Air handling units 19 Air filtration units 20 Others, details stated				
11 Mechanical heating/cooling/refrigeration units	1 Gas/oil fired boilers 2 Electrode/ direct electric boilers 3 Packaged system generators 4 Heat pumps 5 Solar collectors 6 Alternative fuel boilers 7 Primary heat distribution 8 Medium temperature hot water heating 9 Low temperature hot water heating 10 Low temperature hot water heating (domestic) 11 Steam heating 12 Warm air heating 13 Warm air heating(domestic) 14 Local heating units 15 Heat recovery 16 Central				

	refrigeration plant 17 Primary/secondary cooling distribution 18 Local cooling units 19 Cold rooms 20 Ice rinks						
12 Ancillaries for equipment not provided with the equipment	1 Type, size and method of jointing stated	1 Type of equipment stated		1 Integral controls or indicators details stated		D1 Ancillaries shall also include canopies hoods and the like	C4 Jointing ancillaries to equipment is deemed to be included
13 Supports where not provided with the equipment 14 Anti vibration mountings where not provided with the equipment	1 Type, size and method of fixing			1 Background stated			
15 Builder's work in connection	1 Installation stated		Item	1 Formed during construction details stated	M3 Builder's work in connection is only measured if not included elsewhere		
16 Identification where not provided with the equipment or ancillaries	1 Plates 2 Labels 3 Arrows, symbols letters and numbers 4 Others, details stated	1 Type, size and method of fixing stated	nr	1 Details of engraving stated			

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
17 Testing & commissioning	1 Installation stated	1 Preparatory operations, details stated 2 Stage tests (nr) listed and purpose stated	Item	1 Facilities to be provided 2 Instruments to be provided			
DUCTING							
18 Ducting	1 Straight 2 Curved, radii stated 3 Flexible	1 Material, type, shape, size, method of jointing, type, spacing and method of fixing supports stated ----- 1 Cross-reference to specification	m	1 Back ground stated 2 Average height from floor level stated	M4 Ducting is measured over all fittings and branches M5 In case of flexible ducting the length shall be taken as the net centre line length of duct	C5 Ducting is deemed to include: a Joints in the running length b Stiffeners	
19 Items extra over ducting in which they occur	1 Lining, ducting internally	1 Type and thickness of lining material and internal size of ducting stated			M6 Lining may alternatively be given in the description of the ducting		
	2 Special joints and connections 3 Fittings 4 Access openings and covers of doors 5 Nozzle outlets 6 Test holes and covers	1 Type, size, duct size and method of jointing stated	nr	1 Size stated where different from ducting which jointing or connection occurs 1 Method of jointing stated where different from duct in which fitting occurs		D2 Special joints and connections are joints which differ from those generally occurring in the running length or are connections to ducting of a different profile or material or to equipment and appliances	C6 Access openings, nozzle outlets and test holes are deemed to include the stiffening of openings C7 Cutting and jointing ducts to fittings is deemed to be included

20 Ancillaries	1 Type, size, method of jointing, type number and method of fixing supports	1 Type of ducting stated			1 Integral controls and indicators details stated 2 Background stated	D3 Ancillaries shall also include volume dampers, splitter, dampers and the like	C8 Cutting and jointing ducts to ancillaries is deemed to be included
21 Ducting supports which differ from those with ductline	1 Shape, size of duct, type and size of support, method of fixing duct and support stated				1 Lined with insulation, details stated 2 Background stated		
22 Ducting sleeves through walls, floors and ceilings	1 ≤ 300 mm length 2 and thereafter in 300 mm stages	1 Type and size of ducting stated			1 Method of fixing and type of packing stated		
23 Grilles	1 Type, size, pattern, method of fixing and spacing stated	1 Cross reference to specifications					
24 Diffusers							
25 Fire dampers	1 Type, size method of fixing and activation stated						
26 Silencers/ Acoustic treatment	1 Type, size, method of fixing and spacing stated						
27 Others	1 Details stated						
THERMAL INSULATION							
28 Insulation	1 Pipe and ducts, type stated	1 Nominal size of pipeline, conductivity, density and thickness stated	m				C9 Insulation is deemed to include: a. Smoothing the materials and working around supports

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
	2 Insulation boxes for pipes and ducts	1 Type of infill, conductivity, density and thickness stated	nr				b.Working around pipe flanges c.Working around fittings excluding metal clad facing insulants
	3 Equipment	1 Overall size, conductivity, density and thickness stated					
29 Items extra over insulation	1 Pipes and ducts	1 Working around ancillaries					
	2 Equipment						
	3 Pipes and ducts where insulation has metal cladding facing	1 Details stated					
	4 Vapor barrier	1 Type, thickness stated	m				

SECTION S

ELECTRICAL INSTALLATIONS

This section of the standard covers the Method of Measurement of conduits and trunking, cables, outlet points, light fittings, lamps and accessories, bells, clocks, alarms control gear, equipment and appliances, and builder's work in connection with installation, of building works.

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
<p>The following information is shown either on location drawings under B Preliminaries or on further drawings which accompany the bills of quantities :</p> <p>a. Scope and location of the work</p> <p>b. A distribution sheet setting out the number and location of all fittings and accessories</p> <p>c. The layout of the points</p>				<p>M1 The work in each type of installation for example lighting, power distribution ventilating and air conditioning, as well as in main switch gear and any other equipment serving more than one distribution is classified under an appropriate sub-heading</p> <p>M2 Excavations under this section are measured in accordance with excavations for pipes under section Q</p>	<p>D1 Finishes and surface treatments exclude decorative finishes which are measured under Section V</p>	<p>C1 Providing everything necessary for jointing is deemed to be included</p> <p>C2 Patterns, moulds templates and the like are deemed to be included</p>	<p>S1 Specified codes of practice and regulations</p> <p>S2 Kind and quality of material</p> <p>S3 Gauge thickness of substances of material</p> <p>S4 Tests, with which materials must comply</p> <p>S5 Finishes or surface treatments applied on site</p> <p>S6 Nature of the background to which work is to be fixed</p>
CLASSIFICATION TABLE							
1 Mains connection	1 Type and current rating, type of attachment, length of main stated		Item	1 Underground 2 Overhead	M3 If mains connections is by a nominated sub contractor then approved sum shall be given		
2 Sub mains	1 Type and current rating, stated		nr				S7 Description of location of main

CLASSIFICATION TABLE					MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
CONDUITS AND TRUNKING					M4 Conduit is measured over all conduit fittings and branches		C3 Conduit is deemed to include :	
3 Conduit	1 Straight 2 Curved, radii stated	1 Type, size and method of fixing stated	m	1 To surfaces 2 In chases 3 In floor screeds 4 In-situ concrete	M5 Conduits shall only be measured if cables are measured separately		a. Bedding, cutting screwing, jointing and all conduit excluding 4.*.1.*. b. Clip and saddles c. Forming holes for conduit entry d. Draw wires, cables and the like e. Components for earth continuity	
	3 Flexible connections	1 Type, size overall length and type of adopters stated	nr					
4 Items extra over the conduit in which they occur	1 Adoptable boxes 2 Floor trap boxes 3 Junction boxes 4 Expansion joints 5 Others details stated	1 Type, size cover and method of fixing stated		1 Background stated			C4 Cutting and jointing conduit boxes is deemed to be included	
5 Connections of conduits to equipment and control gear	1 Components 2 Special boxes 3 Others details stated	1 Type, size and method of jointing						
6 Connections of conduit to trunking								
7 Cable trunking	1 Straight 2 Curved, radii stated	1 Type, size method of jointing and type, spacing and method of fixing all stated	m	1 Background stated			C5 Trunking is deemed to include components for earth continuity	

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8 Items extra over cable trunking in which they occur	1 Fittings	1 Type stated	nr	1 Bushing material, type size stated			C6 Cutting and jointing trunking to fittings is deemed to be included
9 Connection of cable trunking to equipment and control gear	1 Forming holes	1 Size of opening stated					
	2 With flanges 3 With flanges and forming holes	1 Size of opening and size and type of flanges stated					
10 Supports for cable trunking	1 Supports which differ from those given with the trunking	1 Size of trunking and size of support, method of fixing trunking and support all stated		1 Background stated			

CABLES

11 Cables	1 Type, size number of cores, armouring and sheathing stated	1 Drawn into ducts or trunking 2 Fixed to surfaces 3 Laid in trenches 4 Fixed to insulators in overhead lines	m		M6 Cables in ducts or trunking are measured as the net length of the trunking and ducts, other cables are measured as fixed without allowance for sag M7 The following allowances shall be made to cables measured net: a.0.30 m on each cable entering fittings, luminaries or accessories b.0.60 m on each cable entering equipment or control gear	D2 Cables are defined as being laced into circuit groups where, this is specified	C7 Cables are deemed to include : a.Wall, floor and ceiling plates b.Cable sleeves	S8 Details of colour coding or other markings of cables for phase identification
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CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
12 Cable joints	1 Type and size of cable		nr				
13 Cable supports which differ from those given with cables	1 Size of cable, type and size of support and method of fixing stated	1 Fixed to surfaces 2 Fixed to conductors in overhead lines					
14 Busbar trunking	1 Straight 2 Curved, radii stated	1 Type, size cover, method of jointing, number and rated capacity of busbars and type spacing and method of fixing supports	m	1 Background stated	M8 Busbar trunking is measured over all fittings and branches		
15 Items extra over the busbar trunking in which they occur	1 Fittings	1 Type stated	nr				
16 Tap off units	1 Type, size and method of fixing stated	1 Rating capacity		1 Background stated			
17 Feeder units							
18 Fire barriers							
19 Busbar trunking supports	1 Size of trunking type and size of support and						

which differ from those given with basbar trunking	method of fixing stated							
20 Electrodes	1 Type and size stated			1 Driven or buried into the ground				
21 Lightning protection system	1 Type and rating stated		Item		M9 Lighting protection system deemed to include arrestors, conductors and electrodes			
OUTLET POINTS					M9 Final circuit point wiring not forming part of a domestic or simple installation are kept separate and measured in detail in accordance with 1-20.*.* and 22-46.*.*		C8 Final circuit point wiring is deemed to include:	S9 Voltage and amperage stated
22 Final circuit point wiring	1 Cable installation size and type of cable and description of final circuit stated 2 Cable and conduit installation, type of cable, conduit and description of final circuit stated	1 Sockets, heaters, cooker outlets and the like 2 Immersion heaters, cooker outlets and the like 3 Lighting switches 4 One way switches 5 Two way switches 6 Intermediate switches	nr	1 Cables and protective conductors for earthing 2 Surface 3 Concealed 4 Background and method of fixing stated	M10 Final circuit point wiring is measured on an enumerated points basis where they form part of a domestic or similar simple installation from distribution board and the like M11 Each lighting outlet is measured as one point irrespective of the number of lamps	a) Conduit accessories including conduit boxes required for the particular type of installation b) Fixing, bending cutting, screwing and jointing c) Determining routes		

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
					M12 Cables and protective conductors for earthing are only given in the description where they form an integral part of the final circuit point wiring		
LIGHT FITTINGS LAMPS AND ACCESSORIES							
23 Socket outlets 24 Switches	1 Type, rating and method of fixing stated		nr				
25 Light fittings	1 Type, size and method of fixing stated	1 Cross reference to specification		1 Ceiling roses details stated 2 Shades, diffusers and reflectors, details stated 3 Lamp holders, details stated 4 Connector block details stated 5 Suspension system, details stated			
26 Lamps and tubes	1 Type, size and rated capacity				M13 Lamps and tubes may alternatively be given in the description of light fittings	C9 Lamps and tubes are deemed to include fixing into light fittings	
27 Accessories	1 Type and rated capacity stated	1 Cross reference to specification					

BELLS, CLOCKS, ALARMS AND THE LIKE								
28 Bells	1 Type, size rated capacity and method of fixing	1 Cross-reference to specification	nr	1 Support provided details and method of fixing stated				C10 Plates, discs, and labels for identification are deemed to be included
29 Clocks								
30 Inter communication system								
31 Alarms								
32 Loud-speakers								
CONTROL GEARS								
33 Switch gear	1 Type, size rated capacity and method of fixing stated	1 Cross-reference to specification	nr	1 Fuses 2 Support provided with equipment details and method of fixing stated 3 Background stated				S10 Limiting dimensions of the size and weight of the equipment
34 Distribution board								
35 Contactors and starters								
36 Motor drives								
37 Supports where not provided which switch gear, distribution board, contactors motor drives	1 Type, size and method of fixing stated							

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
EQUIPMENTS AND APPLIANCES							
38 Trans-formers	1 Type, size and method of fixing stated rated capacity stated where applicable	1 Cross-reference to manufacturer's specification	nr		D3 Transformers shall mean those provided by the contractor	C11 Accepting delivery, storing and handling are deemed to be included	
39 Generators							
40 Motors							
41 Fans							
42 Washing machines							
43 Cookers							
44 Refrigerators							
45 Similar equipments and appliances							
46 loose ancillaries	1 Keys 2 Tools 3 Spares 4 Others, details stated	1 Type, quality and quantity stated		1 Name of recipients			
47 Identification where not provided with equipments or control gears	1 Plates 2 Discs 3 Labels 4 Arrows, symbols, letters 5 Charts	1 Type, size and method of fixing		1 Details of engraving stated 2 Mounting of charts, details stated			
48 Disconnecting setting a side	1 Type of equipment and purpose of disconnection		Item				

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and refixing for the convenience of other trades							
49 Testing and commissioning	1 Installation stated	1 Stage tests (nr) listed and purpose stated 2 Instructions of personnel in operation		1 Attendance required 2 Instruments to be provided			C12 Provision of electricity and other supplies and test certificates are deemed to be included
BUILDER'S WORK IN CONNECTION WITH INSTALLATION							
50 Marking position and forming of holes, mortices and chases in the structure	1 Installation stated		Item	1 Forming during construction, details stated			

SECTION T

FLOOR/ WALL/ CEILING FINISHES

This section of the standard covers the Method of Measurement of floor finishes: insitu floor finishes, granite/ ceramic/ clay/ terrazzo tiles, mosaic/ wood blocks / parquet flooring, concrete slabs, plastic/ carpet tiling/ sheeting and Wall and ceiling finishes : Plastered/ rendered/ rough cast coating, mineral coatings, sprayed or special work, plaster board, insitu terrazzo/ grano tiles, boards, others, decorative papers/ fabric/ plastics of building works

SECTION T1

FLOOR FINISHES

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
The following information is shown either on location drawings under B preliminaries or on further drawings which accompany the bills of quantities: a. The scope and location of the work b. A general description of the work where it is not evident from the location drawings				M1 The area measured is that in contact with the base and no deductions is made for voids $\leq 0.1 \text{ m}^2$ M2 Work in staircase areas and plant rooms are each given separately M3 Curved work is so described stating the radii	D1 Floor/ wall/ ceiling finishes shall be given separately as stated in D1 of insitu concrete D2 The work is deemed internal unless described as external D3 Floors include landings and canopies		
CLASSIFICATION TABLE							
IN-SITU FLOOR FINISHES							
1 Cement sand screed	1 Level and to slopes $\leq 15^\circ$ from horizontal 2 To slopes $> 15^\circ$ from horizontal	1 Thickness stated	m^2	1 Patterned, details stated 2 Floor finishes laid in bays stated 3 Floor finishes laid in one operation with their base and	D4 The thickness stated is nominal thickness	C1 Patterned work is deemed to include all extra work involved C2 Bonding agents where included with the work is deemed to be included	S1 Nature of surface treatment including polishing S2 Kind, and quality composition and mix of material S3 Method of
2 Concrete							
3 In-situ terrazzo	3 Falls and cross falls	1 Average thickness stated					

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4 In-situ Granolithic				overhand work
	4 Treads	1 Width and thickness stated	m	1 Patterned, details stated 2 Inserts, size or section stated 3 Moulded, shape stated
	5 Plain riser 6 Undercut riser	1 Height and thickness stated		
	7 Strings 8 Aprons	1 Dimensioned description		
	9 Linings to channels	1 Horizontal 2 To falls		
10 Skirting 11 Kerbs 12 Edges of floors	1 Height or width or girth and thickness stated 2 Dimensioned description			
5 Accessories	1 Reinforcement, details stated	1 Cross-reference to specification	m ²	

	C3 Insitu floor finishes shall deemed to include dividing strips where applicable C4 Fair joints, out-lets, working over and around obstructions, forming shallow channels are deemed included	application S4 Nature of base S5 Kind and quality of dividing strips stated where applicable S6 Special curing of finished work
D5 Treads include nosings and grooves for non-slip inserts and the like	C5 Treads and risers are deemed to include fair edges, internal and external angles C6 Strings and aprons are deemed to include ends, angles, ramped & wreathed covers C7 Linings to channels are deemed to include arrises covers, ends, angles and outlets C8 Skirting kerbs and edges or floors are deemed to include fair edges, rounded edges, covered junctions, angles, angles and the like	
D6 Movement joints include expansion joints		S7 Method of fixing where not at the discretion of the contractor

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
	2 Movement joints 3 Cover strips 4 Nosings		m				
GRANITE/ CERAMIC/ CLAY, TERRAZZO / TILES, MOSAIC / WOODBLOCKS PARQUET FLOORING, CONCRETE SLABS					D7 Nature stone includes marble, granite, sandstone, limestone and the like	C9 The work is deemed to included: a. cutting b. bedding mortars and adhesives c. grouting d. cleaning, sealing and polishing	S8 Kind and quality of materials S9 Size, shape and thickness of units S10 Bedding or other method of fixing
6 Granite tiles	1 Level and to slopes $\leq 15^\circ$ from horizontal	1 Plain 2 Work with joints laid out stated	m ²	1 Patterned work, details stated 2 Inserts, size or section stated 3 Marble, granite and other natural stone, source to be stated			
7 Marble tiles	2 To slopes $> 15^\circ$ from horizontal						
8 Other natural stone tiles							
9 Ceramic tiles							
10 Clay tiles							
11 Terrazzo tiles	3 Treads	1 Width stated	m			C10 Work to tread and risers are deemed to include fair edges, internal and external angles	
12 Mosaic	4 Plain risers 5 Undercut risers	1 Height stated				C11 String and aprons are deemed to include fair edges, ends, angles and ramps	
13 Wood blocks							
14 Parquet flooring	6 Strings 7 Aprons						
15 Concrete slabs							
16 Pressed concrete tiles	8 Linings to channels	1 Horizontal 2 To falls		1 Girth on face stated		C12 Linings to channels are deemed to include arises, coves, ends, angles, intersections and outlets	
17 Others							
	9 Skirting	2001 Height stated		1 Patterned work		C13 Skirting and	

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	10 Kerbs 11 Edges of floor and landings	2 Height and width stated		2 details stated 2 Flush 3 Raking 4 Inserts, size section stated		kerbs are deemed to include fair edges, rounded edges, ends, angles and ramps	
18 Accessories	1 Movement joints 2 Cover strips 3 Dividing strips	1 Dimensioned description			D8 Movement joints include expansion joints		S11 Method of fixing
	4 Ornaments, dimensioned description and character stated	1 In-situ 2 Precast	nr		D9 Ornaments are irregularly occurring features		
PLASTICS / CARPET TILING / SHEETING				M4 Width is the width of each face			
19 Plastic tiling	1 Width ≤ 300 mm	1 Level to falls ≤ 15° from horizontal 2 To slopes > 15° from horizontal	m	1 Patterned details stated 2 Inserts, size or section stated 3 Underlays		C14 The work is deemed to include: a.fair joints b.working over and around destructions into recess and shaped inserts c.additional labour for overhead work d.fixing at perimeter	S12 Kind, quality and size of materials S13 Nature and number of underlays S14 Nature of base S15 Method of fixing and treatment of joints S16 Cross reference to specification
20 Carpet tiling	2 Width > 300 mm		m ²				
21 Carpet sheeting							
22 Plastic sheeting							
23 Others							
	3 Strings 4 Aprons 5 Treads	1 Width stated	m			C15 Strings, aprons are deemed to include ends, angles. C16 Treads and risers are deemed to include fair edges, internal and external angles	
	6 Plain risers 7 Undercut risers	1 Height stated					

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
	8 Skirting 9 Kerbs 10 Edges of floors and landings	1 Height stated ----- 1 Height and width stated		1 Patterned, details stated 2 Inserts, size or section stated 3 Flush 4 Raking		C17 Work to skirtings and kerbs is deemed to included fair edges, rounded edges, moulded edges corved functions, ends, angles and ramps	
	11 Lings to channels	1 Girth on face stated		1 Patterned, details stated 2 Inserts, size or section stated		C18 Linings to channels are deemed to include arises, covers, ends, angles intersections and outlets	
24 Accessories	1 Nosings 2 Dividing strips 3 Movement joints	1 Dimensioned description				C19 Nosings are deemed to include working finishings there to C20 Mitred regular and irregular angles are deemed to be included	
	4 Carpet holders 5 Carpet clips		nr				

SECTION T2

WALL AND CEILING FINISHES

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
The following information is shown either on location drawings under B Preliminaries or on further drawings which accompany the bills of quantities: a. The scope and location of the work b. A general description of the work where it is not evident from the location drawings				M1 The area measured is that in contact with the base and no deductions is made for voids $\leq 0.10m^2$ M2 Work in stair case areas & plant rooms are each given separately M3 Curved work is so described stating the radii M4 Work to ceiling and beams over 3.50 m above floor (measured to ceiling level in both cases) except in staircase areas, is so described stating the height in further 1.50 m stages	D1 The work is deemed internal unless described as external	1 The work is deemed to include: a.fair joints b.outlets,working over and around obstructions, pipes,and the like into recesses and shaped inserts c.bonding agents where included with the work C2 Patterned work is deemed to included all extra work involved	
CLASSIFICATION TABLE							
PLASTERED / RENDERED/ ROUGH CAST COATINGS, MINERALS COATINGS, SPRAYED OR SPECIAL WORK, PLASTER ROAD, TERRAZZO / GRANO				M3 Where suspended ceilings are to be installed without cornices or cover trims,allowance of 0.05m shall be made for the	D2 Sloping ceilings includes stepped ceilings	C3 Work to walls, ceilings, beams and columns is deemed to include internal and external angles and intersections	S1 Kind,quality composition and mix of materials including water proofing agents and other admxtures and
1 Walls	1 Width ≤ 300 mm	1 Thickness and number of coats stated	m	1 Patterned, details stated			
2 Ceilings	2 Width > 300 mm		m ²	2 Sloping			

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
3 Isolated beams 4 Isolated columns		2 Thickness of plaster board or other rigid sheet and thickness and number of coats			height above the finished ceiling level		plaster board or other rigid sheeting S2 Method of application S3 Nature of surface treatment or resin sealing coat S4 Special curing of finished work S5 Nature of base
5 Moldings 6 Cornices 7 Architraves 8 Ceiling ribs 9 Others		1 Girth stated ----- 1 Dimensioned description	m	1 Patterned details stated 2 Raking 3 Vertical	M4 Moldings, cornices, architraves ceiling ribs are measured the length in contact with the base M6 Girth is the visible contour	C4 Angles, mitres, intersections and the like, are deemed to be included	
10 Accessories	1 Insulation type and thickness stated	1 Walls 2 Ceilings 3 Isolated beams 4 Isolated columns	m ²				S6 Proprietary name, kind quality and thickness of board insulation and method of fixing
	2 Movement joints 3 Cover strips	1 Dimensioned description	m				
11 Ornaments 12 Arches, doors and the like	1 Character stated		nr			D2 Ornaments are irregularly occurring features	
GLAZED/ CERAMIC TILING/ MOSAIC, TERRAZZO/ GRANO TILES, BOARDS, OTHERS						D3 The thickness C5 The work is	S7 Kind and

SECTION U

GLAZING/ INFILL PANELS

This Section of the standard covers the Method of Measurement of glazing and infill panels of building works								
INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION	
The following information is shown either on location drawings under B Preliminaries or on further drawings which accompany the bills of quantities: a. The scope and location of the works								
CLASSIFICATION TABLE								
1 Ordinary glass	1 Glazing	1 Panes (nr) area $\leq 0.10 \text{ m}^2$ 2 Panes (nr) area $0.10 \text{ m}^2 - 0.50 \text{ m}^2$ 3 Panes (nr) area $0.50 \text{ m}^2 - 1.00 \text{ m}^2$ 4 and thereafter in 0.50 m^2 stages	m^2	1 Multiple glazed panes 2 Irregular shaped panes	M1 Each pane is measured separately for multiple glazing panes where not in sealed units M2 Panes of irregular shape are classified and measured according to the smallest rectangular area from which the pane can be obtained	D1 Multiple glazed panes are the constituent plans of glazing of more than one layer D2 Ordinary glass is clear or figured sheet glass not exceeding 5 mm thick D3 Irregular shapes are any shapes other than rectangular	C1 Glazing is deemed to include raking and curved cutting	S1 Kind, quality and thickness of glass S2 Kind and quality of glazing compound S3 Method of securing to frame/surround S4 Nature of frame or surround
	2 Louvers	1 Dimensioned description	nr					
2 Special glass	1 Glazing	1 Panes (nr) area $\leq 0.10 \text{ m}^2$ 2 Panes (nr) area $0.10 \text{ m}^2 - 0.50 \text{ m}^2$ 3 Panes (nr) area $0.50 \text{ m}^2 - 1.00 \text{ m}^2$ 4 and thereafter in 0.50 m^2 stages	m^2	1 Multiple glazed panes 2 Irregular shaped panes		D4 Special glass is ordinary glass $>5\text{mm}$ thick and any glass other than ordinary glass which includes: a. Laminated b. toughened c. enamelled and		

CLASSIFICATION TABLE					MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
INFILL PANELS/ SHEETS								
10 Infill panels (nr)	1 Thickness stated		m ²	1 Curved, radii stated 2 Panels requiring special treatment to edges		D7 Infill panels are rigid sheets, spandrel and infill panels of all kinds other than glass fixed with beads, gaskets and the like into wood, metal, plastic and concrete surrounds excluding panels/ sheets forming an integral part of a component or cladding system as in section M	C3 Infill panels are deemed to include sealants, mastic, setting blocks and fixing	S9 Kind and quality of materials and if timber whether swan or wrot S10 From of construction and jointing details where individual panel in more than one piece S11 Method of fixing where not at the discretion of the contractor

SECTION V
PAINTING

This section of the standard covers the Method of Measurement of painting work of building works.

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
<p>The following information is shown either on location drawings under B preliminaries or on further drawings which accompany the bills of quantities:</p> <p>a) The scope and location of the work</p>				<p>M1 The area or girth measured is the area or girth covered including allowances for the extra girth of edges, mouldings, panels, corrugations and the like</p> <p>M2 Work to ceilings and beams over 3.50 m above floor except in staircase areas is so described stating the height in further stages of 1.50 m</p> <p>M3 No deduction is made for voids $\leq 0.10 \text{ m}^2$</p> <p>M4 Work to floors walls and ceilings are each given separately</p>	<p>D1 Work is deemed internal unless otherwise stated</p> <p>D2 Irregular surface are corrugated, panelled or ornamental surfaces such as trellis, fretwork, louvers and the like</p> <p>D3 Isolated surface include the girth of associated moulding</p>	<p>C1 The work is deemed to include for all preparation of surfaces, cleaning down, smoothing, knotting, protection of the floors, fittings and the like</p>	<p>S1 Kind and quality of materials</p> <p>S2 Nature of base</p> <p>S3 Preparatory work</p> <p>S4 Priming or sealing coats</p> <p>S5 Under coats</p> <p>S6 Finishing coats (nr)</p> <p>S7 Method of application</p> <p>S8 Party coloured or work picked out</p>
CLASSIFICATION TABLE							
1 Plastered work	1 General surfaces	1 Girth > 300 mm	m^2	1 Plain surfaces	M5 Work to piers, columns is added to similar work on walls	D4 Isolated surfaces are isolated beams, piers, mouldings and the like	
		2 Isolated surfaces girth < 300 mm	m	2 Irregular surface			

CLASSIFICATION TABLE					MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
2 Asbestos cement work 3 Synthetic work					M6 Work to beams is added to similar work on ceilings			
4 Wood work	1 General surfaces 2 Facia/ verge boards, handrails, picture rails, skirtings and the like	1 Girth > 300 mm 2 Isolated surfaces girth ≤ 300 mm	m ² m	1 Plain surfaces 2 Irregular surfaces		D5 General surfaces of wood work include the following : a. Unglazed timber doors and windows including their frames/ linings architraves, beads, edges and the like b. Built-up cupboard fronts c. Timber boarding	C2 The work is deemed to include painting to access panels, hatches, blackboards and the like	
	3 Glazed windows and doors		m ²		M7 The area measured is each side of windows, and doors, measured flat overall plus the associated linings, frames, sills, architraves and the like		C3 Glazed work is deemed to include: a. Edges of opening lights b. Additional painting to the surrounding frame caused by opening lights c. Work on glazing beads, butts and fastenings attached there to	
	4 Balustrading, railing, fencing, gates and the like		m	1 Plain open type 2 Close type 3 Ornamental type	M8 The work is measured flat overall both sides and stated	D6 Examples of plain open type fencing are plain post and wire, chain link, wire mesh, post and rail and the like		

						D7 Examples of close type fencing are close boarded built-up concrete and corrugated	
	5 Timber trusses	1 Dimensioned description	nr				
5 Metal work	1 Steel beams and columns 2 Members of lattice girders, purlins and the like 3 Roller, shutters, grills, railings balustrading fences, gates and the like	1 Girth > 300 mm	m ²	1 Plain general surfaces 2 Irregular surfaces 3 Application on site to members prior to fixing	M9 The height of structural metal work is measured to the highest point of the members in the height range as follows : a. Structural metal work height 3.50 m - 5.00 m b. and thereafter in 1.50 m stages M10 Work on roller shutters, grills, balustrades fences and gates are measured flat both sides and stated M11 The work is measured both sides flat overall and stated	D8 Isolated area includes gusset plates, base plates and the like	C4 Work in metal work is deemed to include work to attached holder-bats, fastenings and the like
		2 Isolated surfaces girth ≤ 300 mm	m				
		3 Isolated areas ≤ 0.50 m ² irrespective of girth	nr				
	4 Trusses	4 Dimensioned description					
	5 Glazed windows and doors		m ²				
6 Services	1 Gutters 2 Pipes, conduits, cables, ducting bars and the like	1 Girth > 300 mm 2 Girth ≤ 300 mm 3 Isolated surfaces	m ² m m			D10 Painting to isolated services units such as flushing systems, rain water heads and the like is classed as painting services	C5 Work to services is deemed to include work to saddles, pipe hooks, holder-bats, conduit box and the like

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
7 Sign writing	1 Letters 2 Figures 3 Others, details stated	1 Size stated	nr				

SECTION W

DRAINAGE SYSTEMS

(SURFACE / BELOW GROUND/ AGRICULTURAL)

This section of the standard covers the Method of Measurement of storm water drainage, below ground drainage/ agricultural work of building works.

INFORMATION PROVIDED				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
1.Information regarding the nature of excavation work described in accordance with section D information provided 2.The following information is shown either on location drawings under B preliminaries or on further drawings which accompany the bills of quantities : a. The layout of the drainage				M1 The work in each different type of drainage system is given separately under an appropriate sub-heading M2 The work under this section commences from and including the first manhole to and including connection to the main sewer or septic tank M3 Work outside the boundary of the property is given separately			
CLASSIFICATION TABLE							
STORM WATER DRAINAGE				M4 Excavation work is measured in accordance with section D			
1 Excavation							
2 Kerbs	1 Dimensioned description		m	1 Foundation and haunching		C1 Kerbs and channels are deemed to include cut angles and ends	S1 Kind and quality of materials
3 Channels				2 Curved, radii stated			

CLASSIFICATION TABLE					MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
							C2 Foundation and haunching is deemed to include formwork and reinforcement	S2 Mix details S3 Bedding and surface finish S4 Nature and extent of foundation and haunching
BELOW GROUND DRAINAGE/ AGRICULTURAL					M5 The width of the trench to be taken is the nominal size of the pipe plus 400 mm. The measurement is subject to minimum width of 500 mm	D1 Backfilling with special material shall mean where selected or treated excavated materials or imported materials are used	C3 Excavating trenches is deemed to include : a. earth work support b. consolidation of trench bottoms and finishing to required gradient c. backfilling with excavated materials d. disposal of surplus excavated materials e. trimming excavations f. special protection of pipes	
4 Excavating trenches	1 Pipes \leq 100 mm nominal size 2 Pipes 100mm-200mm nominal size 3 Pipes $>$ 200mm nominal size, nominal size stated	1 Average depth of trench \leq 250 mm and thereafter in 250 mm stages	m	1 Backfilling with special materials details stated 2 Commencing level stated 3 Disposal of specified locations details stated 4 Surface treatment, details stated				
5 Items extra over excavating trenches, irrespective of depth	1 Breaking out existing materials	1 Rock	m ³	1 Reinstating to match existing	M6 The measurement of extra over items is based on the width of the beds in the trenches where there are no beds the width to be taken is the nominal size of	D1 Rock is any materials which is of such size or position that it can only be removed by wedges, special plant or explosives		
	2 Breaking out hard pavings, thickness stated	1 Concrete 2 Reinforced concrete 3 Brick work block work or stone work 4 Coated macadam	m ²					

		or asphalt 5 Others			the services plus 400 mm. In both cases measurement is subject to minimum width of 500 mm		
	3 Lifting turf for preservation	1 Method of preserving details stated					
	4 Next to existing live services	1 Type and number of services stated	m		M7 To measured where precautions are specially required	D3 Retaining service is a precaution which is specially required	S5 Nature of special requirement
	5 Around existing live/services crossing trench						
	6 Excavating below water level 7 Excavating below ground water level		m ³		M8 Excavating trenches below ground water level is measured where the ground water level is above the bottom of the trench		
	8 Next to road ways 9 Next to existing buildings				M9 Next to road-ways and next to existing buildings shall be as defined in definition rules D7 and D8 of section D		
6 Disposal	1 Surface water 2 Ground water		Item		M10 An item for disposal of ground water is only measured where a corresponding item is measured in accordance with W.5.7 and is adjusted accordingly if the post contract water level is different	D4 Surface water is water on the surface of the site	

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
7 Beds	1 Width and thickness of bed stated	1 Nominal size of pipe stated	m			C4 Beds, haunchings surrounds and casings are deemed to include fromwork	
8 Beds and haunchings							
9 Beds and surrounds	1 Width thickness of bed and thickness of surrounds stated						
10 Pipes	1 In trenches 2 In ducts in the ground 3 Others, details stated	1 Nominal size stated	m	1 Curved, radii stated	M11 Pipes are measured over all fittings and branches	C5 Pipes are deemed to include pipe supports	S6 Method of laying and jointing S7 Kind and quality of pipe
11 Items extra over in which they occur	1 Fittings	1 Bends 2 Tees 3 Junctions 4 Reducers 5 Others type stated	nr		M12 Fittings which are reducing are measured extra over the largest pipe in which they occur	D5 Fittings are those used for pipes > 50 mm nominal diameter	C6 Cutting and jointing pipes to fittings is deemed to be included
12 Pipe accessories	1 Type stated	1 Dimensioned description				D6 Accessories include gullies, traps, inspection inlets, non-return flaps and the like D7 Dimension stated includes the nominal size of each inlet and outlet	C7 Accessories are deemed to include jointing pipes there to and bedding in concrete
13 Manholes 14 Inspection chambers	1 Type and size stated	1 Invert depth < 1.00 m 2 Thereafter in 0.5 m stages				M13 Reference to type shall be as stated in specifications/drawings	D8 Size shall be the internal plan dimensions

SECTION X

EXTERNAL WORKS

This section of the standard covers the Method of Measurement of roads, pavings, surfacing/paving for sport, landscaping work related to building works

INFORMATION PROVIDED					MESUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
The following information is shown either on location drawings under B Preliminaries or on further drawings which accompany the bills of quantities: a. The scope location of the work					M1 Work is deemed external unless described internal			S1 Kind and quality of materials stated
CLASSIFICATION TABLE								
ROADS								
1 Excavation					M2 Excavation, earth work support disposal, filling, surface treatments and the like are measured in accordance with section D	D1 Roads include in-situ concrete roads/ pavings and coated macadam / asphalt/ others		
2 Earth work support								
3 Disposal								
4 Filling								
5 Surface treatment								
6 Concrete					M3 Concrete, form work, reinforcement joints and finishes to concrete roads are measured in accordance with section F	D2 Concrete includes in-situ concrete kerbs/ edgings/ channels to in-situ concrete		
7 Formwork								
8 Reinforcement								
9 Joints								
10 Finishes								
11 Coated	1 Thickness and	1 Cross-reference	m ²	1 Level and falls	M4 The area	D3 The thickness	C1 Work is deemed	S2 composition and

macadam asphalt	number of coats stated	to specification		$\leq 15^\circ$ from horizontal 2 To falls and cross falls $> 15^\circ$ from horizontal	measured is that in contact with the base and no deduction is made for voids $\leq 0.1m^2$	stated is the finished thickness	to include: a.fair joints b.working over and around obstructions into recesses and shaped inserts c.forming of working into shallow channels and associated labours d.lining to channels	mix of materials S3 Method of application S4 Nature of surface treatment S5 Nature of base
12 Others								
13 Kerbs	1 Stone	1 Dimensioned description	m	1 Curved, radii stated			C2 Kerbs, edgings and channels are deemed to include excavation, foundation, formwork haunching, cut angles & ends	S6 Mix details S7 Bedding and fixings S8 Surface finishes S9 Nature and extent of foundation and haunching
14 Edgings	2 Pre-cast concrete							
15 Channels	3 Bricks 4 In-situ concrete							
16 Line making	1 Type of paint and colour stated							
17 Bollards	1 Dimensioned description		nr					
18 Signs and lettering								
PAVINGS								
19 Pavings	1 Thickness stated	1 Horizontal 2 To falls and cross falls	m^2	1 Bedding, thickness stated 2 Patterned, details stated		D4 Pavings shall include slab, brick, block, rubble stone, pebble stone and and the like	C3 Work is deemed to include : a.fair joints b.working over obstructions c.cutting d.forming or working finishes into shallow channels includ-	S10 Size shape and thickness of units S11 Nature of surface finish S12 Bedding or other method of fixing

CLASSIFICATION TABLE					MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
							ing all associated labours	S13 Treatment of joints S14 Nature of base
20 Treads	1 Width and thickness stated		m	1 Patterned, details stated			C4 Work is deemed to include all fair edges, angles, foundations	
21 Risers	2 Height stated			2 Curved, radii stated			C5 Foundation and haunching is deemed to include form work	
22 Kerbs	1 Dimensioned description						C6 Linings to channels are deemed to include edges, angles and outlets	
23 Linings to channels	1 Girth of face stated							
24 Accessories	1 Separating membrane	1 Thickness stated	m ²					
	2 Movement joints	1 Dimensioned description	m	1 Curved, radii stated		05 Movement joints include isolation joints		
SURFACINGS/ PAVINGS FOR SPORT								
25 Liquid applied surfacings	1 Number of coats and surface finish stated	1 Method of application stated	m ²	1 Level and to falls ≤ 15° form horizontal 2 To falls and cross falls ≥ 15° from horizontal			C7 Work is deemed to include: forming or working into shallow channels and associated labours	S15 Nature of base
26 Coloured tar-macadam sports surfacings and pavings	1 Thickness, number of coats and surface finish stated							
27 Concrete sports surfacings and pavings	1 Thickness and surface finish stated							

28 Line making	1 Width and number of coats stated		m					S16 Preparatory work
29 Letters and figures	1 Dimensioned description		nr					S17 Treatment applied between coats
LANDSCAPING (PLANTING, TURFING, PONDING, IRRIGATION, FURNITURE)								
(PLANTING)								
30 Ground preparation	1 Depth stated	1 Method of ground preparation	m ²					S18 Composition of materials stated
31 Surface applications	1 Type stated	1 Method of application						S19 Size and type of pits, holes and trenches
32 Trees/shrubs	1 Botanical name	1 Girth height, root system stated	nr	1 Planting in ground or grassed areas prepared by others, details stated 2 Support and ties 3 Refiling with special materials, details stated 4 Root balling details stated	D6 Types of surface applications include herbicides selective weed-killers, manure compost fertilizer, sand, coconut husks and the like described D7 Removing surplus excavated materials means removing from site unless otherwise described	C8 Ground preparation is deemed to include the removal of stones, excavating or forming pits, holes, trenches, refilling, watering in, removing surplus excavated material and levelling	C9 Planting in prepared ground or grassed areas prepared by others is deemed to include all necessary reinstatement	S20 Type of supports and ties
33 Young nursery stock trees		1 Height and root system stated						
34 Hedge plants		1 Height stated						
		1 Height, spacing, number of rows and layout stated	m					
35 Herbaceous plants		1 Size stated	nr					
36 Others								
37 Mulching after planting	1 Around individual plants	1 Thickness and area stated						S21 Special materials for refilling
	2 Beds	1 Thickness stated	m ²					S22 Type of mulch time and method of application

CLASSIFICATION TABLE				MESUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
38 Protection	1 Trees guards 2 Wrapping 3 Others, details stated	1 Dimensioned description	nr				S23 Type of tree guard and method of fixing S24 Type of wrapping
(TURFING/ SEEDING)							
39 Ground preparation	1 Depth stated	1 Method of ground preparation	m ²		D8 Types of surface application include, herbicides, selective weed killers, manure, compost, fertilizer sand coconut husks and the like	C10 Ground preparation is deemed to include items in C8 C11 Seeding is deemed to include raking or harrowing in and rolling	
40 Surface application	1 Type and method stated	1 Method of application					
41 Turfing		1 Method of securing turves					
42 Seeding	1 Type stated						
(PONDING, FOUNTAINS, DOMESTIC POOLS)							
43 Excavation					M5 Excavation and each of the accompanying items earth work support disposal, filling surface treatment is measured in accordance with section D		
44 Concrete work					M6 Concrete work and each of the accompanying items, form work, reinforcement is measured in accordance with Section F		
45 Rubble/ stone					M7 Rubble/stone work finishes		

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work					electrical/mechanical are each measured in accordance with their appropriate Sections			
46 Finishes								
47 Electrical/ Mechanical								
(IRRIGATION)					M8 Normal pipes and fittings shall be measured in accordance with section Q			
48 Normal pipes and fitting								
49 Slotted pipes	1 Type, nominal diameter method of fixing supports all stated	1 Surface mounted 2 On ground 3 Buried	m	1 Straight 2 Curved, radii stated			C12 Slotted pipes, seep hoses, tickle pipes, other pipes and the like are deemed to include joints necessary solely for lengthening purposes and fittings \leq 50 mm diameter	S25 Method of jointing pipes
50 Seep hoses								
51 Trickle pipes								
52 Other pipes of similar nature								
53 Excavating trenches					M9 Excavating trenches for pipes shall be measured in accordance with Q21			
54 Items extra over the slotted pipes, seep hoses, tickle	1 Fittings	1 Elbows 2 Bends 3 Tees 4 Junctions 5 Plugs 6 Reducers 7 Others, type stated	nr		M10 Fittings which are reducing are measured extra over the largest pipe in which they occur	D9 Fittings measured are those > 50 mm nominal diameter		S26 Cutting and jointing pipes to fittings is deemed to be included

CLASSIFICATION TABLE				MEASUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
pipes and other pipes and the like in which they occur	2 Special joints and connections	1 Type and method of jointing stated		1 Nominal size stated where different from pipe in which joint or connection occur		D10 Special joints and connections are joints which differ from those generally occurring in the running length or are connections to pipes of different profile or material connections to existing pipes or to equipment appliances	
55 Pumps 56 Control valves 57 Filters 58 Storage tanks 59 Fertilizer injection plants	1 Type, size pattern, capacity and method of fixing stated	1 Ancillaries provided with fixtures, appliances and equipment, details stated		1 Supporting structures details stated			
60 Sprinklers 61 Sprays 62 Emitters	1 Type, number of nozzles, nozzle diameter and spacing stated	1 Cross-reference to specification					
(OUT DOOR FURNITURE)				M11 Excavation, concrete work, back filling for foundations are	D11 Furniture includes general purpose furniture and equipment or	C13 Providing everything necessary for jointing is deemed	S27 Such information as is appropriate to the procurement,
63 Gates	1 Component drawing reference		nr				

<p>64 Pedes- train and vehicle barriers and railings</p> <p>65 Pre- fabricat- ed plant contai- ners</p> <p>66 Litter bins, dust bins</p> <p>67 Poster display units</p> <p>68 Cycle stands</p> <p>69 Flag staffs</p> <p>70 Cloths drying fittings</p> <p>71 Sculpture and other ornamen- tal features</p> <p>72 Others, details stated</p>	<p>1 Dimensioned diagram</p>			<p>measured in accordance with their appropriate sections. Alternati- vely details of excavation and concrete back- filling for foundations may be included with the items</p> <p>M12 Gates are only measured where not included with fencing</p>	<p>any material design for use externally but excluding items provided by a statutory undertaking, local authority or services sub- contractor</p>	<p>to be included</p> <p>C13 Gates are deemed to included all ironmongery items</p>	<p>design, execution supply and / or manufacture of the item and its incorporation in the works</p> <p>S28 Finishes or surface treatment applied on site</p>
<p>73 Sign writing</p> <p>74 Carving and sculptur- ing</p>	<p>1 Dimensioned description</p>						

CLASSIFICATION TABLE					MESUREMENT RULES	DEFINITION RULES	COVERAGE RULES	SUPPLEMENTARY INFORMATION
(FENCING)					M13 Fencing is measured over supports and special supports	D12 Supports are posts, struts and the like occurring at regular intervals D13 Special supports are posts, struts and the like other than those occurring at regular intervals D14 The height of fencing is measured from the surface of the ground (or other stated base) to the top of the infilling or where there is no infilling, to the top wire or rail D15 Curved fencing is fencing curved between supports	C14 Work is deemed to include : a. excavating holes for supports, special supports and independent gate supports b. backfilling and disposal of surplus materials c. earth work support C15 Excavating below ground water level and breaking out existing materials, hard pavings and the like are deemed to be included with the items	S29 Construction
75 Fencing	1 Type stated	1 Height of fencing spacing height and depth and type of foundation for supports stated	m	1 Curved 2 To ground sloping > 15° from the horizontal				
76 Special supports extra over fencing in which they occur	1 End posts 2 Angle posts 3 Straining posts 4 Gate posts 5 Others, details stated	1 Size, height and depth of foundation of supports stated	nr	1 Method of fixing stated 2 Details of struts stated				
77 Independent gate posts	1 Type stated							
78 Gates	1 Cross reference to specification ----- 1 Component drawing reference	1 Height and width stated	nr			C16 Gates are deemed to include all ironmongery items		

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