

Table 2: Comparison of SMM7/BESMM3 with Section 1 in BESMM 4

Ref:	SMM7/BESMM3	Ref:	BESMM4
A	Preliminaries		<p>Similar provision, expanded and greater detail added to give clear direction. Divided in 2 sections, Part 1 for the main contract and Part 2 for works packages if used.</p> <p>1 Main Contract Preliminaries Part A Information and requirements Part B Pricing Schedule Preliminaries (Works Package Contract) Part A Information and requirements Part B</p> <p>1 Pricing Schedule Similar provision as SMM7 but expanded and greater detail added to give clear direction</p>
B	Complete Buildings		<p>2 Offsite manufactured materials, components or buildings There were no details provided in SMM7, now rules included for prefabricated structures, units (eg Bathroom pods) in proprietary packages.</p>
C	Demolitions and Alterations		<p>3 Demolitions Rules remain very similar, however recycling provisions have been added.</p> <p>4 Alterations, repairs and conservation Rules covering conservation have been increased and decontamination has been expanded, however spot items have been removed.</p>
D	Groundwork		<p>5 Excavation and filling Generally no change in principles</p>
D20.1	Site Prep Removing trees		<p>Increased detail on site preparation items if used, eg: boreholes, trial pits etc.</p> <p>5.2 Removing trees - the band widths have been varied. Rules now simplified into either bulk excavation or foundation excavation with depth ranges now only in 2 m stages.</p>
D20.2	Excavating		<p>5.6 Earthwork support has been simplified in that it is now only measured where specifically called for in the contract documents (specification)</p> <p>5.7 There is no requirement to measure working space or compacting of surfaces.</p> <p>5.11 Filling is now either less than 500mm or final thickness stated where over 500mm thick</p> <p>5.2 Cutting off the tops of piles has been included here instead of in the piling section.</p> <p>6 Ground remediation and soil stabilisation New section added Piling - no real change although simplified by removing separation of different types of piles and cutting off tops has been moved to excavation.</p> <p>7 Underpinning - Greatly simplified. Preliminary trenches and excavation measure no longer required.</p> <p>8 Diaphragm walls - simplified, no excavation measured here, detail description stating thickness of wall.</p> <p>9 In-situ concrete Separated out precast from in-situ concrete and radical change in the way concrete is measured New sections are: Mass concrete - m3 any thickness Horizontal work - m3 > or < 300mm thick sloping - m3 > or < 300mm thick vertical - m3 > or < 300mm thick Sundry - m2 or m3 > or < 300mm thick Sprayed -m2 thickness stated Formwork - some minor changes. If less than 500mm wide then measured by metre</p>
E	In-situ concrete/large precast		<p>11.13 run. Mortices and holes have been removed from this section Forming door openings has changed and these are now numbered.</p>
E20	Formwork		<p>11.33 Reinforcement - minor changes Spacers and chairs are now deemed included. Pre tensioned members have now been added.</p>
E30	Reinforcement		<p>11.38 Remains the same has been removed as a separate section</p>
E40	Designed joints		<p>11.41 Accessories - no real change Grouting and filling- new section added, measurement now chasing is by metre and</p>
E41	Worked finishes and cutting		<p>11.42 grouting stanchion bases or filling holes by number</p>
E42	Accessories		<p>12 Precast/ Composite concrete Now a section for composite precast units, measured m2 for walls and floors</p>
E05.16	Grouting		<p>13 Precast Concrete Very similar however formwork and reinforcement is now deemed included</p>
E50/ E60	Precast concrete frames		<p>14 Masonry The natural and artificial stone rules are now all put under one section. All walls measured along centreline and assumed vertical unless stated. Skins of hollow walls added Separate facework items have now been removed</p>
F	Masonry		<p>15 Structural metalwork Major changes - weight classification now Less than 25Kg, 25 - 50 kgs, 50 - 100 kgs or over 100kgs. Short lengths now also included</p>
G	Structural Metalwork		

0G20	Carpentry/Timber framing/First fix	Permanent formwork changed to profiled metal decking
G30	Metal profiled sheet decking	16 Carpentry Separated primary structural members (wall plates) from engineered or prefabricated members (roof trusses) All boarding, flooring and sheeting is now measured here, either < 600 or > 600mm wide
G31	Prefabricated timber decking	17 Sheet roof coverings Now covers, bituminous felt, plastic sheets, sheet metals and rigid boards. Some major changes in items deemed included in boundary work Removed
H	Cladding and covering Patent glazing, structural glass	This has been split into numerous sections
H10/12 /13	(In SMM7 sections K11-21 are included together under H20)	
H10, 12, 13	Patent glazing/plastics/ structural glass	21 The range of claddings have all been included under section 21
H11	Curtain Walling	Basic measurement principles remain the same.
H20, 21, 92, K11, 12, 13, 14 and 15, H30,31,32,33,41,43	Sheet claddings and profiled sheet claddings and other claddings	The categories have been reduced for example there is no need to differentiate multi-tier roofs. However widths under 600mm wide now need to be measured lineally.
H10.4 and 5	21.1 Other chambers Raking curved cutting	21.8 Doors and openings are still measured as extra over the work in which they occur. 21.9 Boundary work - includes all cutting and trims to form the edge/intersection. 21.1 Opening perimeters Edges of openings are measured here rather than boundary work. The narrow widths and isolated areas for other claddings are now no longer required to be measured.
K20.1.1	Rigid sheet cladding	21.1 be measured. Precast concrete roof lights are now measured with other precast concrete works.
H14	Concrete roof lights	13.2.3.4 There is no change to measurement rules.
K20/21	Timber board flooring	16.4 Carpentry Boarding is measured in metres if not exceeding 600mm wide and in m2 where over 600mm wide.
H51, 52	Natural Stone cladding /cast stone cladding	14.1 Masonry, Natural stone walling and dressings /cast stone walling and dressings Only measured in m2 except for isolated features such as piers/columns or arches etc Perimeters and abutments are now measured as extra over and more work is deemed included.
H51.5	Floors	This is not in the walling section and should now be referred to the finishes section 28.2
H51.6-10	Staircase works	Refer to new section 25.1 where staircases are now numbered.
H60	Plain roof tiling	18 Tile and slate roof and wall coverings Basic principles have not changed
H60.11		41.27 Holes are now not measured with the roof but deemed included.
H70 - H76	Metal sheet coverings etc	17 Sheet Roof Coverings Now introduced width classification< 500mm wide - measured lineally and > 500mm wide measured m2. 17.1 The allowances used in SMM7 when calculating areas have been removed. Now the information provided should identify all labours and dressings. Other principles remain the same.
J	Waterproofing	19 Waterproofing
J40		There is no separation of the item for tanking from coverings. Discretion is given to those drafting the description to include sufficient information to enable pricing. The width classifications have been reduced to now only ,500mm wide or >500mm wide. Skirtings are no longer in band widths but each measured in m stating the net girth on face
J20.5	Skirtings	19.3 girth on face
J20.12	Internal angle fillets	Not measurable - deemed included
J41, 42, 43	Built up felt roofing	17 Sheet roof coverings Principles are similar except width classification now <500mm wide and > 500mm wide Girths at abutments are no longer applicable
K	Linings, sheathing dry partitioning	20 Proprietary linings and partitions
K10.1.1	Proprietary partitions measured in 300mm stages, measured in metres	20.1.1.2 Metal framed systems measured in m2 in 1m height stages, total length stated
K32	Panel cubicles	22.16 Cubicle partitions - no change to measurement
K40	Demountable suspended ceilings	30.1 General principles remain the same. Fire barriers have now been introduced. Measurement principles remain the same. Fire barriers within the void need now to be measured.
K41	Raised Access floors	28.3 measured.
L	Windows, doors and stairs	23 Windows in section 23, Doors in section 24 Bedding and pointing frames is no longer measured. Glazing supplied with windows and doors is now separated and no longer measured in m2, panes are numbered with size given.
L10	Windows	23.8 m2, panes are numbered with size given.
L20	Doors	24 Doors Measurement principles have not changed. Bedding and pointing frames is no longer measured.
P21	Ironmongery	24.16 Ironmongery Measurement principles have not changed.
L30 / Q41	Stairs and balustrades	25 Staircases

No change to measurement principles, except the extra over items for ramps, wreaths etc which are now deemed included.

L40	General Glazing	
L41	Lead light glazing	27 Glazing
L40.1.1		Glass now needs to have the panes numbered with the size stated.
	1 measured glass in m2.	27.1.1.1 The category of special glass has been removed but the type of glass needs to be stated.
L40.7-10	Engraving etching etc was measured in m2 or design work numbered	27.4 All additional features are now measured extra over and are numbered.
L40.13	Hacking out existing glass was measured in metres of the rebate length.	27.8 Removal of glass has changed to be measured by nr. stating the size of panes.
L42	Infill panels	22.18 No change
M	Surface finishes	28 Floor, wall, ceiling and roof finishes
M10, 12,13,20,23 and J10	Applied in situ finishes	28.1 The width category has changed from <300mm to <600mm
M10.16	Rounded angles and intersections	These are now deemed included.
		The measurement principles remain the same however reinforcement, quilts are separated out from accessories. All accessories are now numbered.
M10.24	Accessories	There is the opportunity to measure reinforcement either in m2 or by the m. No width categories are provided.
M10.26	Temporary supports	28.25-35 Deemed included no longer measurable.
M21	Insulation with rendered finish	28.32 Insulation is measured separately from any rendered finish.
M22	Sprayed coatings	No specific rules separating this are included.
M30	Metal mesh lathing	No specific section for this, it is measured either as m or m2, depending on measurers choice.
M31	Fibrous plaster	28.30, 31 No separate rules for this.
M40/42/41/50/51	Tiling, parquet flooring, carpeting	28 No separation from in situ finishes. Width category is now general at <600 or >600. Description of carpeting should now include the underlay and edge grippers. Stair rods should still be measured and numbered as an accessory. The areas that are measured have changed to being<1.00m2 or >1.00m2. Corners are now deemed included.
M52	Decorative papers	29.9 Decoration
M60	Painting and decorating	General principles remain the same. The isolated surfaces have increased form -.5m2 to 1.00 m2.
M60.10	Note M4	29.1.2.1.1 Work to ceilings over 3.5 ne 5m sand thereafter in 3m stages and not 1.5m
M61	Coloured bands	38.16.6 These have been moved to the services section.
N	Intumescent paint fire protection	31.5 Now measured only in m2.
	Furniture and equipment	32 Furniture, fittings and equipment
		Principles have not changed however the marking of positions, commissioning and connecting is deemed included as opposed to being measured in accordance with section Y of SMM7.
P	Building Fabric Sundries	31 Insulation, fire stopping and fire protection.
P10	Insulation, proofing and fire protection	Added ability to measure by m as well as m2 but no width categories given.
P11	Cavity insulation	31.1 Now includes for fire stops by the metre and fire sleeves, numbered
P20	Unframed items	31.6 No change
		22 General joinery
		General principles of measurement unchanged, however all ends, angles etc are deemed included.
P20.8	Extra over hardwood	All the items are now deemed included.
P21	Ironmongery	22 General joinery
	This was ironmongery not supplied with windows or doors.	22.22 Now measured under section 22, principles not changed.
P22	Sealant joints	22.19/ Rules remain the same, however there is now a separate item for raking out existing joints.
P30	Trenches/pipe ways /Pits for buried services	41.13 The external services have been separated from the internal ones
P30.1	Excavating trenches	41.13 Service runs are now measured in 500mm depth stages instead of 250mm. There is no need to measure the bed and surround separately it is now included in the description of the service run.
P30.9	Other chambers	The detailed measurement of the component parts of chambers has been removed and these are now all numbered stating the depth and giving a detailed description
P31	Holes/chases/covers /supports for services	41.17 - 22 A specific item has now been included for testing and commissioning of external services with provision for attendance and additional equipment.
P31.19	Cutting or forming holes	41.27 BWIC with M,E and transportation
		For electrical work there is a removal of need to measure cutting and chasing by points.
		41.1 This is now one item per installation type.
		For other installations there is no need to measure holes by their Number - they are deemed included under the general builders work item for the service.
P31.24 and 25	Ends of Supports	These have been simplified and the types of supports have been broadened to include
		41.6 Pylons, poles, wall brackets, soffit hangers, stays and proprietary supports

P31.32	Work to existing structures	41.8 & 9	There is still a need to cut holes, chases and mortices in existing structures and lifting floor boards and chequer plates.
Q	Paving and Fencing	35	Site Works The principle of deducting for voids has increased from 0.5m2 to <1.00m2.
Q10	Kerbs and edgings	35.1	No major change, accessories are now measured as extra over and are only numbered.
Q21	Insitu paving	35.6	No real change – measured in accordance with new section 11.
Q22	Coated macadam		
Q23	Gravel etc	35.12, 35.13	Addition of band widths, now <300 wide or >300
Q24, Q25	Blok and slab paving	35.14	Addition of band widths, now <300 wide or >300
Q26	Special surfacings	35.18-24	No change however the description for line marking has been broadened.
Q30	Seeding and turfing,		
Q31	Planting	37	Soft landscaping - No change
Q40	Fencing	36	Fencing - No change
R	Disposal Systems		
R10/11	Above ground drainage	33	Above ground drainage The principles for the measurement have not changed.
R10.3, 4 and 5	Sockets tappings and bosses	33.2	Ancillaries now include these items These have been moved to BWIC. See above
R10.7	Supports		This has been removed from the measurement rules
R10.15	Temporary operation		
R12/13	Below ground drainage	34	Below ground drainage The rules for drainage have changed considerably, the excavation and beds and surrounds are not measured separately but included in the drain run length. Drain runs are now measured in average depth for the whole run in 500mm depth
R12.1-6	Excavation and beds and surrounds have all been removed	34.1	stages.
R12.11-15	Chambers	34.6-11	All chambers are numbered stating the depth with a detailed description
R12.19	O & M manuals	34.13 / 34.14	Sundries such as step irons and covers are still measured separately. These are now covered under the Preliminaries section
X	Transport systems	40	Transportation Greater detail has now been included for each system with the addition of separate items to be included for the following Offload and position equipment, assembly of
X1-12	Different systems	40.1	component parts, free issue items, interface and connection to other systems.
X13	marking holes	41.2	Moved to BWIC section
X14	identification	40.3	This is now an item rather than numbered.
Y	M & E Services	38	Mechanical
Y10/ Y11	Pipelines and ancillaries	38.3	Pipework - there has been considerable change to the rules here. Generally the pipe length is to include for all fittings and the like. The measure of the pipe now needs to identify the location of the installation.
Y10.1	Pipes	38.3	There are two alternative rules which can be applied. The metre measure for the pipe can be deemed to include all fittings or they can be separated and enumerated. The description of the fitting is to be precise and the one end, two end approach has been
Y10.2.3	Fittings	38.4	dropped.
Y10.9	Pipe supports		Removed and included in pipe measure or if special can be under BWIC
Y11	Pipe sleeves	38.5	These are now included under ancillaries and again in the BWIC section.
Y20/ Y40	Equipment	38.1	Primary equipment Greater detail has now been included for each piece of equipment with the addition of separate items to be included for the following Offload and position equipment and assembly of component parts. Terminal equipment and fittings - separated out to identify equipment at the ends of
Y20.6	Supports	38.2	pipe or duct runs. These are now under the BWIC - where not included as part of the equipment.
Y30	Air ductlines/ ancillaries	38.6	This is by metre length, generally the length is to include for all fittings and the like. The measure of the duct now needs to identify the location of the installation. There is an alternative of measuring the fittings separately.
Y30.7	Ducting sleeves		This has been removed and the hole required is measured under BWIC.
Y50	Thermal insulation	38.9	Insulation and fire protection Generally the principles have not changed. There is again the need to provide the location of the service. There is also the alternative here to include the insulation to fittings and the like within the measured length or separately.
Y60/ Y63	Conduit and cable trunking	39	Electrical
Y60.1 -12		39.3	Generally containment is measured by length including all fittings and ancillaries The rules have been greatly simplified however there is an alternative whereby the fittings can be enumerated separately.
Y61/ Y62/ Y80	HV/ LV cables, busbar trunking, earthing and bonding	39.4	Forming holes or supports are covered under BWIC section. 39.5 Cables are still measured by length but the locations of the cables have been redefined. Terminations and glands are still enumerated but supports and holes are now measured with the BWIC section.
Y62.7	Busbar trunking	39.9	Busbar This is by metre length, generally the length is to include for all fittings and the like. The measure of the busbar now needs to identify the location of the installation.
		39.1	There is an alternative of measuring the fittings separately.

Y80.13	Tapes	39.11 Tapes The length now includes all joints and test clamps, there is no alternative. Electrodes and terminations are enumerated
Y61.19	Cables in final circuits	39.7 Final circuits These remain as numbered circuits identifying the location of each circuit and the number and type of points. 39.8 Modular wiring systems has been added. This is enumerated.
Y70/ Y71	HV switchgear, LV switchgear and distribution boards	39.1 Primary equipment Enumerated by system stating location and with the addition of separate items to be included for the offload and position of equipment and assembly of component parts. Supports if not provided with the equipment are measured under BWIC. Terminal equipment has been included and covers all the items in this section. They are again enumerated.
Y73/ Y74	Luminaires and lamps / accessories	39.2 Testing and commissioning Testing has been separated from commissioning and further items have been added for system validation training and maintenance.
Y81	Testing and commissioning	39.15 & 16
	Additional rules for work to existing buildings	The work to existing buildings has now been absorbed into the various work sections.

[This article was created by --The College of Estate Management 15 March 2013, adapted for the BESMM4 workshop](#)