

**Series 1200: Traffic Signs and Road Markings**

**Traffic Signs**

Units	<b>1</b>	The unit of measurement shall be:  (i) traffic signs ..... number.
Measurement	<b>2</b>	The measurement of traffic signs shall be the complete Installation except for earth electrodes which shall be measured separately under Series 1400 (paragraphs 24 to 27).
Itemisation	<b>3</b>	Separate items shall be provided for traffic signs in accordance with Chapter II paragraphs 3 and 4 and the following:

Group	Feature	
I	1	Permanent traffic signs.
	2	Prescribed temporary traffic signs.
II	1	Particular sign reference.
III	1	Retroreflective.
	2	Non-retroreflective.
	2	Enhanced retroreflective.
IV	1	Lit Sign Units.
	2	Non Lit Sign Units.
V 1 Different types.		
VI 1 Different sizes.		
VII 1 Different posts or supports.		

**Permanent Traffic Signs**

Item coverage	<b>4</b>	<p>The items for permanent traffic signs shall in accordance with the Preambles to Bill of Quantities General Directions include for:</p> <p>(a) excavation of acceptable material (as Series 600 paragraphs 17 and 18);</p> <p>(b) excavation of unacceptable material (as Series 600 paragraph 19);</p> <p>(c) excavation in hard material (as Series 600 paragraph 23);</p> <p>(d) backfilling and compaction;</p> <p>(e) in situ concrete (as Series 1700 paragraph 5);</p>
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- (f) formwork (as Series 1700 paragraph 15);
- (g) reinforcement (as Series 1700 paragraph 26);
- (h) ducts in bases;
- (i) reinstatement of surfaces;
- (j) covering and removal of covering of signs;
- (k) disposal of material (as Series 600 paragraph 39);
- (l) doors, locks and keys;
- (m) location lettering and marking;
- (n) drilling or forming holes and pockets in structures, lighting columns or foundations and casting in bolts, sockets, base plates and anchorage assemblies;
- (o) bedding and grouting;
- (p) protective system (as Series 1900 paragraph 4);
- (q) rivets, bolts, nuts and the like;
- (r) electrical equipment, wiring, and connections, excluding supply and control cabling;
- (s) conduit including screwed and threaded connections, bends, tees, and the like and draw wires;
- (t) threading cable through ducts, sleeves, conduit and the like;
- (u) backboard, fixings, protective caps, sealing, grommets, spacers, mounting plates and strips;
- (v) complying with wiring regulations, earthing (other than earth electrodes), and inspection;
- (w) protective treatment;
- (x) notices and recording;
- (y) preparation and supply of record drawings;
- (z) light spill screens;
- (aa) fixing to structures and foundations including attachment systems.

**Prescribed Temporary 5** The items for prescribed temporary traffic signs shall in accordance with the Preambles to Bill of Quantities General Directions include for:

Item coverage

- (a) permanent traffic signs (as this Series paragraph 4);
- (b) take up or down and set aside for reuse or remove to store off Site (as Series 200 paragraph 11);
- (c) maintaining and servicing equipment.

**Remove from Store and Re-erect Traffic Signs**

- Units                    **6**     The unit of measurement shall be:
- (i) remove from store and re-erect traffic signs ..... number.
- Itemisation            **7**     Separate items shall be provided for remove from store and re-erect traffic signs in accordance with Chapter II paragraphs 3 and 4 and the following:

Group	Feature
I	1     Remove from store and re-erect traffic signs.
II	1     Retroreflective. 2     Non-retroreflective. 3     Enhanced retroreflective.
III	1     Lit Sign Units. 2     Non Lit Sign Units.
IV	1 Different types.
V	1 Different sizes.
VI	1 Different posts or supports.

- Remove from Store Re-erect Traffic Signs**     **8**     The items for remove from store and re-erect traffic signs shall in accordance with the Preambles to Bill of Quantities General Directions include for:
- Item coverage            (a) loading, transporting from store, unloading and positioning for reerection;
- (b) replacing items damaged during the foregoing operations;
- (c) modification and new materials;
- (d) painting existing painted items;
- (e) permanent traffic signs (as this Series paragraph 4).

**Road Markings**

- Units                    **9**     The units of measurement shall be:
- (i) marking and removal of solid areas ..... square metre.
- (ii) marking and removal of lines ..... linear metre.
- (iii) marking and removal of triangles, circles with enclosing arrows, arrows, kerb markings, symbols, letters and numerals ..... number. (The diagram number from the Traffic Signs Regulations and General Directions to be stated.)

- Measurement
- 10** The removal of road markings shall only be measured where Specifically required by the Contract.
- The marking and removal of solid areas shall only be measured for the solid infilling between converging lines, the enclosing lines themselves shall be measured as lines.
- Road markings which form part of a traffic signal installation or a controlled or uncontrolled crossing shall not be separately measured.
- Road markings which require enhanced reflectorised marking materials for 'wet-night' conditions stated in Appendix 12/3 shall be identified and measured separately.
- 11** Road markings other than those measured under sub-paragraphs 9(i) and (iii) above shall be measured as lines and shall be grouped together according to width.
- In the case of intermittent lines the measurement shall be of the marks only but the length of the mark and gap shall be stated. Double lines shall be measured as two single lines.
- Diagonal lines between double lines and short transverse lines at the ends of any longitudinal lines shall be measured with the lines of which they form part.
- Ancillary lines shall include lines forming hatched areas, chevrons, zigzag lines, boxed areas and lines enclosing boxed areas. In the case of hatched areas and chevrons the enclosing lines shall be measured as the longitudinal line of which they form part. The measurement of zigzag lines shall include any transverse or longitudinal lines at their ends.
- 12** The measurement of circles with enclosing arrows (mini roundabouts) shall be for the complete marking, the external diameter of the circle being stated. Distinction shall be made for all other arrows between straight, curved, turning or double headed.
- 13** Kerb markings shall be measured as a single item irrespective of the number of lines forming any one marking.
- 14** Each letter or numeral shall be separately measured with all letters or numerals grouped together according to height.
- 15** Symbols shall be measured separately and grouped together according to size.
- Itemisation
- 16** Separate items shall be provided for marking and removal of road markings in accordance with Chapter II paragraphs 3 and 4 and the following:

Group	Feature
I	1 Removal of road markings.
	2 Road markings.
II	1 Solid areas.
	2 Continuous lines.
	3 Intermittent lines.
	4 Ancillary lines.
	5 Raised rib lines.
	6 Triangles.
	7 Circle with enclosing arrows.
	8 Arrows.
	9 Kerb markings.

	10	Letters and numerals.
	11	Symbols.
III	1	Different materials.
IV	1	Different widths of lines.
	2	Different sizes of circles with enclosing arrows.
	3	Different lengths of arrows.
	4	Different lengths of kerb markings.
	5	Different heights of letters and numerals.
	2	Different sizes of symbols.
V	1	Different lengths of mark and gap for intermittent lines.
	2	Different diagram numbers for arrows, kerb markings and symbols.
VI	1	Different types.
VII	1	Different colours.
VIII	1	Reflectorised.
IX	1	Different rib spacings.

**Removal of Road Markings** 17 The items for the removal of road markings shall in accordance with **Markings** the Preambles to Bill of Quantities General Directions include for:

- Item coverage
- (a) disposal of material (as Series 600 paragraph 39);
  - (b) reinstatement;
  - (c) apostrophes in the case of letters and numerals;
  - (e) markings down the face of kerbs;

**Road Markings** 18 The items for road markings shall in accordance with the Preambles to Bill of Quantities General Directions include for:

- Item Coverage
- (a) cleaning, brushing and drying surfaces;
  - (b) application of the marking materials including the incorporation of specified reflecting medium;
  - (c) thinners, primers and tack coats;
  - (d) apostrophes in the case of letters and numerals;
  - (e) markings down the face of kerbs;

(f) adhesives;

**Road Studs**

Units	<b>19</b>	The unit of measurement shall be:  (i) road studs ..... number.
Measurement	<b>20</b>	The measurement of road studs shall be the complete installation. Road studs which form part of a traffic signals installation or a pedestrian crossing shall not be separately measured.
Itemisation	<b>21</b>	Separate items shall be provided for road studs in accordance with Chapter II paragraphs 3 and 4 and the following:

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Group	Feature
I	1 Road studs.

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II 1 Different sizes.

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III 1 Different types.

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IV 1 Different coloured reflectors.

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<b>Road Studs</b>	<b>22</b>	The items for road studs shall in accordance with the Preambles to Bill of Quantities General Directions include for:
Item coverage		(a) cutting or forming holes;  (b) milling;  (c) adhesives and grout;  (d) reinstatement of surfaces;  (e) disposal of material (as Series 600 paragraph 39).

**Remove from Store and Re-install Road Studs**

Units	<b>23</b>	The unit of measurement shall be:  (i) remove from store and re-install road studs ..... number.
Itemisation	<b>24</b>	Separate items shall be provided for remove from store and reinstall road studs in accordance with Chapter II paragraphs 3 and 4 and the following:

Group	Feature
I	1 Remove from store and re-install road studs.
II	1 Different sizes.
III	1 Different types.

**Remove from Store and Re-install Road Studs**

**25** The items for remove from store and re-install road studs shall in accordance with the Preambles to Bill of Quantities General Directions include for:

Item coverage

- (a) loading, transporting from store, unloading and positioning for re-installation;
- (b) replacing items damaged during the foregoing operations;
- (c) new materials;
- (d) road studs (as this Series paragraph 22).

**Traffic Signal Installations**

**Definitions**

**26** For the purposes of measurement of Traffic Signal Installations the network is defined as all cabling emanating from either an outstation transmission unit (O.T.U), an outstation monitoring unit (O.M.U.) or an outstation monitoring and control unit (O.M.C.U.) and terminating at a location outside the limits of the site.

Units

**27** The unit of measurement shall be:  
(i) traffic signal installations ..... item.

Measurement

**28** The measurement of traffic signal installations shall be the complete installations except for earth electrodes which shall be measured separately under Series 1400 (paragraphs 24 to 27).

Itemisation

**29** Separate items shall be provided for traffic signal installations in accordance with Chapter II paragraphs 3 and 4 and the following:

Group	Feature
I	1 Permanent traffic signal installations.
	2 Prescribed temporary traffic signal installations.
II	1 Different locations.

<b>Permanent Traffic Signal Installations</b>	<b>30</b>	The items for permanent traffic signal installations shall in accordance with the Preambles to Bill of Quantities General Directions include for:
Item coverage		<ul style="list-style-type: none"><li>(a) excavation of acceptable material (as Series 600 paragraphs 17 and 18);</li><li>(b) excavation of unacceptable material (as Series 600 paragraph 19);</li><li>(c) excavation in hard material (as Series 600 paragraph 23);</li><li>(d) in situ concrete (as Series 1700 paragraph 5);</li><li>(e) backfilling and compaction;</li><li>(f) disposal of material (as Series 600 paragraph 39);</li><li>(g) detectors;</li><li>(h) detector loops (as Series 1500 paragraph 31);</li><li>(i) detector feeders;</li><li>(j) trench for cable (as Series 1400 paragraph 8) excluding network cabling;</li><li>(k) cable (as Series 1400 paragraph 13) excluding network cabling;</li><li>(l) control equipment;</li><li>(m) electrical equipment, wiring, and connections, excluding network cabling;</li><li>(n) marking out, cutting or forming slots, drying, damming, backfilling, cleaning and sealing;</li><li>(o) road markings (as this Series paragraph 18);</li><li>(p) notices and recording;</li><li>(q) numbering and lettering;</li><li>(r) complying with wiring regulations and earthing (other than earth electrodes);</li><li>(s) reinstatement of surfaces;</li><li>(t) preparation and supply of record drawings;</li><li>(u) road studs;</li><li>(v) ducts;</li><li>(w) chambers (as Series 500 paragraph 37);</li><li>(x) protective system (as Series 1900 paragraph 4).</li></ul>
<b>Prescribed Temporary</b>	<b>31</b>	The items for prescribed temporary traffic signal installations shall



**Signal Installations** in accordance with the Preambles to Bill of Quantities General Directions include for:

- Item coverage
- (a) permanent traffic signal installations (as this Series paragraph 30);
  - (b) take up or down and set aside for reuse or remove to store off Site (as Series 200 paragraph 11);
  - (c) removal of road markings (as this Series paragraph 17);
  - (a) maintaining and servicing equipment.

**Controlled and Uncontrolled Crossings**

- Units **32** The unit of measurement shall be:
- (i) controlled crossings ..... item.
  - (ii) uncontrolled crossings ..... item.
- Measurement **33** The measurement of controlled and uncontrolled crossings shall be the complete installation.
- Itemisation **34** Separate items shall be provided for prescribed, controlled and uncontrolled crossings in accordance with Chapter II paragraphs 3 and 4 and the following:

Group Feature

- |       |   |  |
|-------|---|--|
| I     | 1 | Permanent controlled crossings.              |
|       | 2 | Permanent uncontrolled crossings.            |
|       | 3 | Prescribed temporary controlled crossings.   |
|       | 4 | Prescribed temporary uncontrolled crossings. |
| <hr/> |   |  |
| II    | 1 | Different locations.                         |

**Permanent Controlled 35 and Uncontrolled Crossings** The items for permanent controlled and uncontrolled crossings shall in accordance with the Preambles to Bill of Quantities General Directions include for:

- Item coverage
- (a) permanent traffic signal installations (as this Series paragraph 30);
  - (b) road studs;
  - (c) kerbs, channels, edgings, combined drainage and kerb blocks and linear drainage channel systems (as Series 1100 paragraph 4);
  - (d) footways and paved areas (as Series 1100 paragraph 21);
  - (e) flashing beacons and additional lighting.

**Prescribed Temporary 36 Controlled and Uncontrolled Crossings** The items for prescribed temporary controlled and uncontrolled crossings shall in accordance with the Preambles to Bill of Quantities General Directions include for:

- Item coverage
- (a) permanent controlled and uncontrolled crossings (as this Series paragraph 35);
  - (b) take up or down and set aside for reuse or remove to store off Site (as Series 200 paragraph 11);
  - (c) removal of road markings (as this Series paragraph 17);
  - (d) maintaining and servicing equipment.

**Marker Posts**

Units **37** The unit of measurement shall be:  
(i) marker posts ..... number.

Itemisation **38** Separate items shall be provided for marker posts in accordance with Chapter II paragraphs 3 and 4 and the following:

Group	Feature
I	1 Marker posts.
II	1 Different types.

**Marker Posts** **39** The items for marker posts shall in accordance with the Preambles to Bill of Quantities General Directions include for:

- Item coverage
- (a) protective system (as Series 1900 paragraph 4);
  - (b) numerals, symbols and reflectorised strips or discs including adhesive;
  - (c) driving or excavating in any material (as Series 600 paragraphs 17, 18, 19 and 23);
  - (d) backfilling and compaction;
  - (e) sockets;
  - (f) galvanized fixings and fittings;
  - (g) preservation of timber;
  - (h) disposal of material (as Series 600 paragraph 39);
  - (i) in-situ concrete (as Series 1700 paragraph 5);
  - (j) formwork (as Series 1700 paragraph 15);
  - (k) reinforcement (as Series 1700 paragraph 26);
  - (l) reinstatement of surfaces.

**Permanent Bollards**

Units **40** The unit of measurement shall be:  
(i) permanent bollards ..... number.

Itemisation **41** Separate items shall be provided for permanent bollards in accordance with Chapter II paragraphs 3 and 4 and the following:

Group	Feature
I	1 Permanent bollards.
II	1 Internally illuminated. 2 Non-illuminated.
III	1 Different types.
IV	1 Different sizes.

**Permanent Bollards** **42** The items for permanent bollards shall in accordance with the Preambles to Bill of Quantities General Directions include for:

Item coverage (a) permanent traffic signs (as this Series paragraph 4);  
(b) preservation of timber.

**Node Markers**

Units **43** The unit of measurement shall be:  
(i) node markers ..... number.

Itemisation **44** Separate items shall be provided for node markers in accordance with Chapter II paragraphs 3 and 4 and the following:

Group	Feature
I	1 Node markers.
II	1 Different types.
III	1 Different sizes.

**Node Markers** **45** The items for node markers shall in accordance with the Preambles to Bill of Quantities General Directions include for:

Item coverage (a) coring pockets in carriageway;  
(b) cleaning and drying pockets;  
(c) disposal of material (as Series 600 paragraph 39);

(d) incorporation of solid glass beads.