



Southwark Highways Works Contract

Lot B - Projects Contract Document B3c

Technical Specification Minor Alterations

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Appendix 0/2: Contract-specific minor alterations to existing clauses, tables and figures included in the contract

110 Information boards

In sub-clause 1, first sentence, delete '4 weeks' and insert '2 weeks'

201 Clearing

In the first sentence of sub-clause 1, after 'buildings and structures' delete 'as described in Appendix 2/1'.

Delete the third sentence of sub-clause 1 and replace with 'The extent of any partial demolition of structures shall be described in the Task Order.'

In sub-clause 2, delete 'unless otherwise described in Appendix 2/1'.

In sub-clause 3, delete 'described in Appendix 2/1'.

In sub-clause 4, third sentence, delete 'unless otherwise described in Appendix 2/2'.

In sub-clause 6, second sentence, delete 'included in Appendix 2/3' and insert 'suitable for re-use'.

In sub-clause 6, fourth and sixth sentences, delete 'as described in Appendix 2/3'.

In sub-clause 8, delete 'in accordance with the requirements of Appendix 2/3'.

In sub-clause 8, delete 'Clause 1212' and insert 'sub-Clause 1212SR'.

Insert new sub-clause 10 as follows 'Compliance with this sub-clause does not confer immunity from relevant legal requirements.'

302 Requirements for temporary and permanent fences

Delete sub-Clause 3.

306 Permanent fencing

Delete sub-Clauses 2 and 3.

In sub-clause 4, after 'following types' delete 'required as described in Appendix 3/1'.

In sub-clause 5, after 'methods given below' delete 'as described in Appendix 3/1'.

307 Permanent fencing for accommodation works

Delete 'and the particular requirements described in Appendix 1/15'.

308 Gates and stiles

Delete sub-Clauses 3, 4, 5 and 6.

309 Removing and re-erecting existing fences and gates

In sub-Clause 1, after 'Where required' delete 'in Appendix 2/3'.

312 Painting of timber fences, gates, stiles and posts

Delete sub-Clauses 4 and 5 and replace with 'After erection, all exposed primed surfaces shall be painted with one coat of undercoat and two finishing coats.'

Delete sub-Clause 6 and replace with 'As an alternative to painting, the *Contractor* shall, at the request of the *Client*, apply an appropriate coloured wood stain.'

401 General

In sub-Clause 1, delete "Appendix 4/1"

In sub-Clause 5.2(i), delete "and other submission documents and information detailed in Appendix 4/1"

404 Site testing

In sub-Clause 1 (iv) and 3, replace “*contract* specific Appendix 4/1” with “Task Order”.

406 Vehicle parapets – general

Delete sub-Clause 2.

In sub-Clause 3, replace “*contract* specific Appendix 4/1” with “Task Order”.

In sub-Clause 4, delete “and shall comply with the requirements stated in contract specific Appendix 4/1”

409 Inspection and testing of vehicle parapet components

In sub-Clause 2, replace “*contract* specific Appendix 4/1” with “Task Order”.

410 Site tests on anchorages in drilled holes for vehicle parapet for *contract* compliance

In sub-Clause 3, replace “*contract* specific Appendix 4/1” with “Task Order”.

411 Pedestrian parapets and pedestrian guardrails

Delete sub-clause 4

412 Anti-glare

In sub-Clause 1 sentence 3, replace “*contract* specific Appendix 4/1” with “Task Order”.

501 Pipes for drainage and for service ducts

In sub-Clause 1, delete second and third paragraphs.

In sub-Clause 8, delete “Appendix 5/2” and insert “Appendix 5/1”.

In Table 5/2, in the column headed “Particular Requirements”, delete “Class to be as specified in Appendix 5/2”.

In Table 5/2, in the column headed “Particular Requirements”, delete “Appendix 5/2 shall state the resistance to bending requirements” (twice).

504 Jointing of pipes

In sub-Clause 2, delete “Except where otherwise described in Appendix 5/1”.

505 Backfilling of trenches and filter drains

In sub-Clause 9, delete “as described in Appendix 5/2”.

506 Connecting to existing drains chambers and channels

In sub-Clause 1, delete “as described in Appendix 5/1”. In sub-Clause 3, delete “as required by Appendix 5/1”.

507 Chambers

Insert new subclause 19, as follows:

“Draw pit chambers for electrical supply cables shall be as detailed in Appendix 5/1.”

508 Gullies and pipe junctions

In sub-Clause 5, delete the third sentence.

509 Testing and cleaning

In sub-Clause 5, delete second paragraph and insert the following:

“All carrier, foul and filter drains, but excluding all fin and narrow filter drains, shall be surveyed by Closed Circuit Television (CCTV) in accordance with the relevant requirements of Clause 3304AR.”

Delete sub-Clause 8 and renumber sub-Clause 9 as 8.

510 Surface water channels and drainage channel blocks

Insert new sub-Clause 4, as follows:

“Subway drainage channels shall be constructed as described in Appendix 5/3.”

511 Land drains

In sub-Clause 1, delete “as described in Appendix 5/1”.

In sub-Clause 4, delete “or as otherwise described in Appendix 5/1”.

516 Combined drainage and kerb systems

In sub-Clause 1, delete “listed in Appendix 1/11”.

In sub-Clause 2, delete “and as stated in Appendix 5/1”.

In sub-Clause 3, delete “given in Appendix 5/5”.

In sub-Clause 6, delete “and shall be as stated in Appendix 5/5”.

In sub-Clause 10, delete “and shall be as described in Appendix 5/5”.

In sub-Clause 11, delete “Series 9000 (MCHW 5.9, Parts 1 to 5)” and insert “Clause 3304AR”.

517 Linear drainage channel systems

In sub-Clause 1, delete “listed in Appendix 1/11”. In sub-Clause 3, delete “given in Appendix 5/6”.

Delete sub-Clause 7 and renumber sub-Clauses 8 to 18 as 7 to 17.

In new sub-Clause 9, delete “and shall be as described in Appendix 5/6”.

In new sub-Clause 10, delete “Series 9000 (MCHW 5.9, Parts 1 to 5)” and insert “Clause 3304AR”.

In new sub-Clause 10, delete last sentence.

In new sub-Clause 13, delete “complying with Clause 1015 and seated in accordance with Clauses 1016 and 1017”.

518 Thermoplastics structured wall pipes and fittings

In sub-Clause 2, delete the last sentence.

605 Special requirements for class 3 material

Delete sub-sub Clause 1(i).

606 Watercourses

Delete sub-Clause 1.

In sub-Clause 2, insert ‘obstructions and’ after ‘other’.

In sub-Clause 2, insert between the two existing sentences the new sentence ‘The *Contractor* shall excavate sediment debris to the invert level of the ditch to facilitate even flow of surface water.’

In sub-Clause 4, delete ‘where required in Appendix 6/3’.

In sub-Clause 4, delete ‘of the Class described in Appendix 6/3’.

In sub-Clause 4, delete “or receive other treatment, all as described in Appendix 6/3

608 Construction of fills

In sub-Clause 2, delete ‘or, if appropriate, above any ground improvement required by Appendix 6/13’.

In sub-Clause 12, delete ‘or otherwise shaped as required in Appendix 6/3’.

610 Fill to structures

Replace sub-Clause 2 with ‘Material of Class 6Q complying with Table 6/1 shall be used as fill to SHWC Lot B Projects Doc B3c Technical Specification Minor Alterations

structures.’

Delete sub-Clause 6.

611 Fill above structural concrete foundations

In sub-Clause 1, after ‘shall be’ delete remainder of sub-Clause and insert ‘Class 6Q or Class 6R complying with Table 6/1 deposited and compacted in accordance with Clause 608 and 612 and in addition be subject to sub-Clauses 610.4 and 5’

612 Compaction of fills

In sub-Clause 9, delete ‘on material compacted to method requirements at a frequency defined in Appendix 6/3.’

613 Sub-formation and capping

In sub-Clause 11, delete ‘as permitted or required in Appendix 6/7’.

In sub-Clause 12, delete ‘as permitted or required in Appendix 6/7’.

616 Preparation and surface treatment of formation

Delete sub-Clause 4.

Add the following new sub-Clause: ‘7. Where the bottom of the excavation is above the existing formation level the bottom and sides of the excavation shall receive the treatment described in sub-Clauses 1 to 6 inclusive of this Clause.’

643 Lime and cement stabilisation to form capping

In sub-Clause 8, delete ‘or a different rate of testing for the rate of spread as described in Appendix 6/7.’

702 Horizontal alignments, surface levels and surface regularity of Pavement Courses

Horizontal Alignments

In sub-Clause 1, delete “as described in *contract* specific Appendix 1/12”.

In sub-Clause 4, delete “located as described in Appendix 7/1” and replace with “at 10 metre intervals in the longitudinal direction and at 2 metre intervals in the transverse direction”.

In sub-Clause 7, delete from “on sections of” to the end of the sub-Clause and replace with “at intervals to be agreed with the *Client*”.

In sub-Clause 8, delete “as stated in Appendix 7/1” and replace with “to be agreed with the *Client*”.

In sub-Clause 10(v), delete “complying with Clause 1032” and replace with “complying with Clause 1032 or dealt with as described in the instructing Task Order”.

In sub-Clause 10(v), delete all from “in accordance with” to “compliance with the Specification”.

In sub-Clause 10(v), delete “as required in Clause 1048” and replace with “as required in clause 1048 or dealt with as described in the instructing Task Order”.

706 Excavation, trimming and reinstatement of existing surfaces

In sub-Clause 2, replace “required in Appendix 7/2” with “shown in the Task Order”.

Delete sub-Clause 2 and replace with:

“Where excavations and trimming of existing paved areas and highways not constructed as part of the Permanent Works are required in the Task Order, they shall be carried out and reinstated in compliance with this Clause and with any additional requirements described in the Task Order. Excavations shall be carried out to the dimensions described in the Task Order, or, if not so described, in accordance with wither sub-Clauses 3 or 4 of this Clause (as appropriate to the type of surface)”.

Replace sub-Clause 4 with the following:

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“Precast concrete blocks and flags, clay pavers and natural stone slabs and setts Modular Units shall be lifted or cut out (in either case without segmentation of individual units) to the nearest joint satisfying sub-Clause 3 of this Clause and separately stored or set aside for re-use or dealt with as described in the instructing Task Order. Where cutting out of Modular Units is necessary then cuts shall be applied to joints between Units only. In situ kerbs and channels shall be broken out to at least 150mm beyond excavations.”

Delete sub-Clause 5 and replace with:

“For roads designed to carry traffic loading of 120 msa or less, reinstatements of openings in highways shall comply with the ‘Specification for the Reinstatement of Openings in Highways’ issued by the Highway Authorities and Utilities Committee. Unless instructed otherwise by the *Client*, the materials to be used shall be identified and sourced as per Clause 723AR so as to match the existing. The same requirements as for roads designed to carry traffic loadings under 120 msa or less shall apply for roads designed to carry traffic loading of more than 120 msa except where otherwise stated in the appropriate Clauses of the Specification for Highway Works.”

Delete sub-Clause 6.

Change sub-Clause 7 to sub-Clause 6.

Delete sub-Clause 8 and replace with:

“Where the excavation affects grassed areas, unpaved footpaths, footways, verges and bridleways they shall be reinstated to match the existing surface, after backfilling with acceptable material to a depth of 150mm below the existing surface. The reinstatement shall be completed by topsoil and seeding or turfing in compliance with Series 3000, re-using any topsoil or turves cut and stored for re-use, or with materials matching the existing surface as agreed by the *Client*.”

In sub-Clause 9, delete the final sentence.

Delete sub-Clause 10.

709 Cold-milling (planing) of bituminous bound flexible pavement

In sub-Clause 1, delete “to the requirements specified in Appendix 7/9”. Replace sub-Clause 5 with:

“Where milling is carried out on a carriageway open to traffic, temporary ramping to ensure the safe passage of vehicles shall be provided at an incline not exceeding 1:5.”

In sub-Clause 9, delete “unless otherwise described in Appendix 2/3”.

In sub-Clause 11, delete “When specified in Appendix 7/9”.

Add new sub-Clause 12, as follows:

“Immediately after milling, a proof roll with a roller of minimum weight of 3 tonnes shall take place to identify any areas of remaining delaminated materials. Any thin delaminated layers which are loose, or loosen under the load of the roller, shall be removed prior to resurfacing. The resultant surface shall be regulated prior to paving proposed asphaltic layers.”

714 Preparation of jointed concrete pavements prior to overlaying and saw-cut and seal of the bituminous overlays

In sub-Clause 1, delete “specified in Appendix 7/14”.

Delete sub-Clause 3.

803 Type 1 unbound mixtures

Insert the following text at the end of sub-Clause 2:

“Evidence of satisfactory performance in similar mixtures shall be provided when aggregates with a value of Los Angeles coefficient greater than 30 are used”.

804 Type 2 unbound mixtures

Delete sub-Clause 1 and substitute with the following:

“Type 2 unbound granular mixtures shall be made from natural sands, crushed rock, crushed slag, crushed concrete, recycled aggregates or well burnt non-plastic shale. Where permitted in Appendix 7/1 it may also be made of crushed gravel (excluding sea-dredged aggregate).”

903 Placing and compaction of bituminous mixtures

Insert at the beginning of sub-Clause 15:

“The *Contractor* shall record asphalt placement information for each load of mix delivered, including (but no limited to):

- Load quantity;
- Load placement location;
- Surface temperature prior to paving; and
- Asphalt mat temperature recorded at mid-depth prior to rolling commencing.

The minimum asphalt mat temperature at which rolling can commence is 115oC unless otherwise specified in the requirements for specific mixtures.”

Delete sub-Clause 21 and replace with:

“The *Contractor* shall ensure that the asphalt laying program has been developed such that:

- a. The main paving runs are laid first;
- b. All longitudinal joints are parallel to the pavement centreline;
- c. All longitudinal joints are located away from the wheel track zone. For the purposes of this sub-Clause, the wheel-track zone shall be taken to be between 0.5 m and 1.1 m and between 2.55 m and 3.15 m from the centre of the nearest lane marking for each traffic lane (or, in the absence of lane markings, lane edges);
- d. Longitudinal joints are offset by a minimum of 300mm from parallel joints in the layer beneath (excluding joints near the pavement crown); and
- e. Where practical, longitudinal joints are located underneath proposed line markings or lane edges.”

Delete sub-Clause 24 and renumber subsequent sub-Clauses.

Insert at the end of new sub-Clause 26:

“The PSV of surface course asphalt shall comply with the requirements of Clause 962AR.”

Insert new sub-Clause 28:

“Temporary running surfaces in use for more than 3 calendar days shall have a minimum PSV of 55. Where base or binder course are to be trafficked, limestone aggregates shall not be used.”

904 Hot rolled asphalt base

In sub-Clause 1, insert a new sentence between the existing two:

“All hot rolled asphalt base course materials shall incorporate a polymer modified bitumen complying with BS EN 14023 to provide increased resistance to deformation.”

905 Hot rolled asphalt binder course (recipe mixtures)

In sub-Clause 1, insert a new sentence between the existing two:

“All hot rolled asphalt binder course layers shall incorporate a polymer modified bitumen complying with BS EN 14023 to provide increased resistance to deformation.”

918 Slurry surfacing incorporating microsurfacing

In sub-Clause 1, delete “specified in Appendix 7/7 and the schedule of constraints on site availability in Appendix 1/13”.

Delete sub-Clause 14 and insert:

“Traffic Safety and Management shall be strictly in accordance with the requirements of Series 100 and any site specific additional requirements specified by the *Client*.”

In sub-Clause 20, delete “or as stated in Appendix 7/7”.

In sub-Clause 30, delete final sentence.

919 Surface dressing: recipe specification

In sub-Clause 1(i), delete the first sentence and insert “Ensure that” at the beginning of the second sentence.

In sub-Clause 1(ii), delete “subject to the requirements described in Appendix 7/21. The tolerances permitted for this work shall be as specified in Appendix 7/21.”

In sub-Clause 1(iv), delete “or as otherwise described in Appendix 7/21”.

In sub-Clause 2, delete “as stated in Appendix 7/21”.

In sub-Clause 3, delete “including those specified in Appendix 7/21”.

In sub-Clause 4, delete “and that it complies with the requirements set out in Appendix 7/21”.

In sub-Clause 6, delete “and that it complies with the requirements set out in Appendix 7/21”.

Delete sub-Clause 9 and insert:

“Traffic Safety and Management shall be strictly in accordance with the requirements of Series 100 and any site specific additional requirements specified by the *Client*.”

In sub-Clause 10, delete “together with any additional limitations set out in Appendix 7/21”.

In sub-Clause 15, delete “or as specified in Appendix 7/21”.

920 Bond coats, tack coats and other bituminous sprays

Insert at the beginning of sub-Clause 2:

“Bond coats shall be used underneath all asphalt layers. Bond coats shall conform to the requirements outlined in BS 594987:2010 Clause 5 and the requirements specified in Appendix 7/1.”

Insert at the beginning of sub-Clause 3:

“Tack coats shall not be used without the prior approval of the *Client*.”

In sub-Clause 6, delete the first sentence.

In sub-Clause 6, delete “When specified in Appendix 7/4”.

921 Surface macrotexture of bituminous surface courses

In sub-Clause 2, delete the last sentence and replace with:

“Texture depth for each set of 10 individual measurements and for each

1,000m section (or complete carriageway lane where this is less than 1,000m) shall be in accordance with the appropriate values shown in Table 9/3, unless otherwise specified in Appendix 7/1. Average minimum texture depth shall be 1.0mm where High Friction Surfacing is to be laid immediately on new bituminous surface course.”

922 Surface dressing: design, application and end produce performance

In sub-Clause 1, delete “and the schedule of constraints on site availability in Appendix 1/13”.

In sub-Clause 5, delete “as stated in Appendix 7/3”. Delete sub-Clause 12 and insert:

“Traffic Safety and Management shall be strictly in accordance with the requirements of Series 100 and any site specific additional requirements specified by the *Client*.”

In sub-Clause 13, delete the first sentence.

In sub-Clause 15, delete the second sentence.

In sub-Clause 16, delete “or as specified in Appendix 7/3”.

In sub-Clause 19, delete the last sentence.

924 High friction surfaces

In sub-Clause 1, insert the following as the second sentence:

“The materials shall be machine laid, unless otherwise authorised by the *Client* or for small areas as specified in Appendix 7/1.”

In sub-Clause 4, insert the following as the second paragraph:

“Where the surfacing treatment is to be applied on a bus lane, the aggregate shall be of a colour as stated on the drawings or as agreed with the *Client*. A sample shall be submitted to the *Client* for acceptance 14 calendar days prior to work commencing on site.”

In sub-Clause 7, insert at the beginning:

“The *Contractor* shall inspect the site and satisfy himself that the existing road surface is satisfactory for the proposed treatment. Its acceptance of this Clause will be assumed unless they have expressed doubts about the suitability of the road surface in writing to the *Client* prior to the commencement of the work on site.”

938 Porous asphalt

In sub-Clause 1, delete “as specified in Appendix 7/1.”

942 Thin surface course systems

Insert new sub-Clause 19, as follows:

“Where required, the surface shall be gritted with 0/4 dust free or very lightly bitumen coated crushed rock fines at a rate exceeding 600 g/m² before final compaction is complete and rolled in. Excess material shall be removed by sweeping.”

943 Hot rolled asphalt surface course and binder course (performance- Related Design Mixtures)

In sub-Clause 1, insert the following new sentence at the end:

“All hot rolled asphalt binder and surface course materials shall incorporate a polymer modified bitumen complying with BS EN 14023 to provide increased resistance to deformation.”

947 In situ cold recycled bitumen bound material

In sub-Clause 2, delete “in the sections of the works defined in *contract* specific Appendix 7/18”.

In sub-Clause 12, delete “as required in Appendix 7/18”.

In sub-Clause 14, delete “stated in Appendix 7/18” and insert “agreed with the *Client*”.

In sub-Clause 17, delete “to ensure that all parts of the existing road designated in Appendix 7/18 are included in the works”.

In sub-Clause 19, delete “at locations given in *contract* specific Appendix 7/18”.

In sub-Clause 32, delete “the rate stated in *contract* specific Appendix 7/18” and insert “a rate to be agreed with the *Client*”.

In sub-Clause 49, delete “described in *contract* specific Appendix 7/18” and insert “agreed with the

Client.

In sub-Clause 49, delete “stated in *contract* specific Appendix 7/18” and insert “agreed with the *Client*” (twice).

In sub-Clause 50, delete “specified in *contract* specific Appendix 7/18” and insert “agreed with the *Client*”.

In Table 9/20, delete “Note: subject to the absolute minimum added bitumen content has stated in *contract* specific Appendix 7/18.”

1008 Steel reinforcement

In sub-Clause 9, delete “described in Appendix 7/1” and insert “specified by the *Client*”.

1009 Transverse joints

In sub-Clause 1, delete “described in Appendix 7/1” and insert “specified by the *Client*”.

1017 Joint seals

In sub-Clause 1, delete the second sentence.

In sub-Clause 2, delete “as stated in Appendix 7/1, and”.

1028 Trial lengths

In sub-Clause 5(iv), delete “in Appendix 7/1” and insert “by the *Client*”.

1033 Full depth repairs and reinstatements

In sub-Clause 13, delete “as described in Appendix 7/2”.

In sub-Clause 15, delete “where directed in Appendix 7/2”. In sub Clause 16, delete “where directed in Appendix 7/2”.

1044 Pavements with an exposed aggregate concrete surface

In sub-Clause 2, delete “complete Appendix 10/1 and submit this with its tender documents” and insert “provide, for the approval of the *Client*, a detailed method statement to achieve the required surface”.

In sub-Clause 2, delete “contained in Appendix 10/1”.

In sub-Clause 3, delete “Appendix 10/1” and insert “the *Contractor*’s method statement”.

In sub-Clause 5 (i), delete “of Appendix 7/1” and insert “specified by the *Client*”.

In sub-Clause 5(ii), delete “as required in Appendix 7/1”.

In sub-Clause 5(v), delete “in Appendix 7/1” and insert “by the *Client*”.

In sub-Clause 8, delete “Appendix 10/1” and insert “the *Contractor*’s method statement”.

In sub-Clause 12, delete “Appendix 10/1” and insert “its method statement”.

In sub-Clause 16, delete “Appendix 10/1” and insert “the *Contractor*’s method statement”.

In sub-Clause 23, delete “Appendix 10/1” and insert “its method statement”.

In sub-Clause 27, delete “requirements of Appendix 7/1” and insert “*Client*’s requirements”.

In sub-Clause 27, delete “stated in Appendix 7/1” and insert “required by the *Client*”.

In sub-Clause 31, delete “macrotexture depth requirements defined in Appendix 7/1” and insert “*Client*’s macrotexture depth requirements”.

1101 Precast concrete kerbs, channels, edgings and quadrants

Change Heading to:

“Precast Concrete and Stone Kerbs, Channels and Quadrants, Precast Concrete Edgings and

Natural Stone Setts”.

In sub-Clause 1 after “BS EN 8500” insert:

“Stone Kerbs, channels, quadrants and setts shall comply with BS EN 1341:2012, BS EN 1342:2012 and BS EN 1343:2012”.

In sub-Clause 1 after the first sentence insert:

“They shall be manufactured with granite aggregate and allowed to cure for at least 28 calendar days before laying.”

In sub-Clause 3 delete the sentence:

“At expansion joints in bridge decks, the kerb joints shall be as described in Appendix 11/1.”

In sub-Clause 5, delete “and quadrant” and insert “quadrant and setts” and insert new sub-Clause 6, as follows:

“Kerbs, channels and edgings to sizes and profiles not covered shall be manufactured to the standards of BS EN 1339:2003 as to strength, shape and surface finish. The sizes and profiles of such kerbs, channels and edgings shall be the same as in the superseded BS 340. They shall be laid in accordance with BS 7263-4:2006”

1106 Footways And Paved Areas (In-Situ Concrete)

Add the following sub-Clause 4:

“Synthetic fibres shall be added to the concrete mixing plant at a rate of 0.9kg per cubic metre of concrete as and when directed by the *Client*.”

1201 Regulations, Sign Classification And Standards

Replace sub-Clause 4(ii) with the following:

“prescribed temporary traffic signs. Any of the traffic signs defined in the Regulations, or specially authorised by the Secretary of State, or any part thereof, which comply with the requirements of a permanent traffic sign but which will not remain in position at the completion of the permanent works;”.

1205 Sign Plates For Permanent Traffic Signs

Replace sub-Clause 1 with the following:

“All sign plates shall comply with BSEN 12899-1:2007. Signs shall be manufactured in an aluminium/polyethylene composite meeting the requirements of BSEN 12899-1:2007 relating to impact resistance and corrosion resistance unless authorised by the *Client*. Sheet aluminium and extruded aluminium planks, together with stiffening and framing, shall meet the “mechanic properties and construction” requirements of BSEN 12899-1: 2007.”

Insert new sub-Clause 2 as follows:

“All signs shall be covered by a minimum manufacturer’s guarantee of 8 years.”

Sub-Clauses 2, 3 and 4 to be renumbered 3, 4 and 5 respectively.

Insert new sub-Clause 6 as follows:

“All component parts shall have clear cut edges, free from warp, and shall have a smooth even finish.”

Insert new sub-Clause 7 as follows:

“Each sign shall be stiffened and/or framed with aluminium channel sections such that it complies with BSEN 12899. Horizontal stiffeners shall be at a maximum of 600mm centres or otherwise in accordance with the manufacturer’s recommendations. Gantry signs shall be framed and stiffened to withstand a wind load of 3kN/m².”

Sub-Clause 5 to be renumbered 8, and delete “in Appendix 12/1,”.

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Sub-Clause 6 to be renumbered 9.

Insert new sub-Clause 10 as follows:

“Stiffening of sign plates shall be in accordance with BSEN 12899 in that stiffening shall be achieved in a manner such that the sign face is not punctured or otherwise damaged. Aluminium channel sections shall be fitted to the sign plates in accordance with the manufacturer’s instructions. All rivets and other devices for fixing sign plates to the framework/stiffening shall be of aluminium alloy or other material approved by the *Client*. Rivets shall be spaced to suit the structural requirements of BSEN 12899 and shall be spaced uniformly at not more than 150mm apart. No rivets shall be brought through the sign face.”

Insert new sub-Clause 11 as follows:

“All brackets, clips and butting plates used in sign assemblies shall be manufactured from stainless steel. All screws, bolts, nuts and washers shall be stainless steel, but where these are in contact with materials which may be damaged by overtightening, protective washers of nylon or other approved material shall be inserted.”

Insert new sub-Clause 12 as follows:

“All signs shall be permanently marked on the reverse with the name or code of the manufacturer together with the month and year of manufacture. The markings shall be discrete but clearly visible upon inspection.”

1206 Faces For Permanent Traffic Signs

Replace sub-Clause 1 with the following:

“The retroreflectivity of Class 1 (EN 12899-1: 2001 Table 8) new traffic sign faces (white) shall be 50cd/lx/m² (entrance angle = +5 degrees, observation angle = 1/3 degree). The retroreflectivity of Class 2 (EN 12899-1: 2001 Table 9) new traffic sign faces (white) shall be 180cd/lx/m² ($\alpha = 20'$, $\beta 1 = +5$ degrees).”

Replace sub-Clause 2 with the following:

“Non-reflective signs shall be covered over the whole front face with non- reflective plastic sheeting to the specified colours. Reflective signs shall be covered over the whole front face with the appropriate combination of reflective and non-reflective plastic sheeting to the specified colours. The whole of the back surface of all signs shall be covered with a black non-reflective plastic sheeting or other black finish. The sheeting shall extend to all parts of the sign not covered by sign face material. All plastic sheeting shall be fixed in accordance with the sheeting manufacturer’s instructions.”

Insert the following at the start of sub-Clause 8:

“Plastic sheeting shall be fixed to the sign plate either with a heat activated adhesive using a vacuum applicator or with a pressure sensitive adhesive using a pressure roller, all in accordance with the sheeting manufacturer’s instructions for the class of materials specified.”

1207 Construction And Assembly Of Permanent Traffic Signs

In sub-Clause 1, delete “BS 873 : Part 6” and replace with “BSEN 12899”.

In sub-Clause 8, delete “and they and its anchorages” to the end.

1209 Covering Of Permanent Traffic Signs

Replace the first sentence of sub-Clause 1 with the following:

“Where it is required that permanent traffic signs be blanked-out or have an alternative message, the method to be adopted shall comply with the following unless otherwise directed by the *Client*.”

In sub-Clause 7, delete “Irrespective of any requirement in Appendix 12/1 to cover signs,”.

1213 Road Studs

Replace sub-Clause 5 with the following:

“The *Contractor* shall submit to the *Client* details of the reflecting road studs, fixing methods and materials they propose to use in the works for the *Client’s* approval.”

Insert new sub-Clauses 6 to 8, as follows:

6. Rubber inserts for existing reflecting road studs shall be rectangular and depressible with either uni-directional or bi-directional reflectors. Permanent reflecting stick-on road studs shall be 119mm x 58mm x 13mm, rectangular with either uni-directional or bi-directional corner cube reflectors.
7. Inset studs shall be removed by cutting around the perimeter of the stud. Levering out of position shall not be permitted. The carriageway cavity shall immediately be made good with 6mm medium graded wearing course or 10mm close graded bitumen macadam as directed, fully compacted and level with the adjoining surface. Inset studs set aside for reuse shall be stacked neatly in positions to cause no danger or inconvenience to road users.
8. Permanent retroreflecting road studs shall be fixed in the following manner. Vertical sided sockets not exceeding the length and width of the stud by 6mm or depth by more than 2mm shall be cut in the carriageway by means of a hydraulic power drilling unit, and the cavity shall be cleared of all waste material. Filled bitumen (50% - 70% of filler) properly heated and agitated to ensure fluidity and proper distribution of the filler shall be poured into the cavity to a depth of 6mm ± 1mm and the stud placed in the cavity and lightly tamped. The filled bitumen shall be poured to fill all cavities between the stud and surrounding socket walls and finished flush with the carriageway surface. After installation, the studs shall not project above the surface of the carriageway in the immediate vicinity more than 6mm at its edge nor at its highest point by more than 25mm when not depressed or 20mm when depressed. Fixing of studs shall not proceed during wet or frosty weather without the approval of the *Client*.”

Renumber sub-Clause 6 to sub-Clause 9. Delete sub-Clause 7.

Renumber sub-Clause 8 to sub-Clause 10.

Insert new sub-Clause 11 as follows, beneath the heading “Pedestrian Crossings”:

“Studs for pedestrian crossings shall be either: a) 100mm x 100mm square, cast aluminium, coloured silver or light grey, and with a fishtail shank. They shall not be fitted with reflecting lenses. They shall not project more than 20mm above the carriageway at its highest point, nor more than 6mm at its edges; or b) 100mm x 100mm thermoplastic road studs.”

Insert new sub-Clause 12 as follows, beneath the heading “Setting Out”:

“The *Contractor* shall be responsible for the correct setting out of all studs. Studs shall be fixed in the carriageway parallel to the centre line and other markings and at centres conforming to the relevant statutory or advisory requirements. Unless directed otherwise by the *Client*, on roads having intermittent line markings, the studs shall be symmetrically located between the markings.”

1214 Traffic Cones, Traffic Cylinders, Flat Traffic Delineators And Other Traffic Delineators

In sub-Clause 4, delete “as stated in Appendix 12/4”.

In sub-Clause 9, delete “BS 873 : Part 6” and replace with “BSEN 12899”.

In sub-Clause 10, delete “BS 873 : Part 1” and replace with “BSEN 12899”.

In sub-Clause 11, delete “BS 873 : Part 6” and replace with “BSEN 12899”. Delete sub-Clause 18.

In sub-Clause 20, delete “in Appendix 1/5” and “as given in Appendix 1/5”.

In sub-Clause 20, delete “56” and insert “55”. Delete sub-Clause 56.

1216 Temporary Traffic Signs

In sub-Clause 1, delete “117” and insert “117SR”.

In sub-Clause 2(i)(a), delete “BS 873 : Part 6” and replace with “BSEN 12899”.

In sub-Clause 2(i)(b), delete “Appendix 12/1” and insert “the *Client*”.

In sub-Clause 2(i)(b), delete “BS 873 : Part 2” and replace with “BSEN 12899”.

In sub-Clause 2(i)(c), delete “Appendix 12/1” and insert “the *Client*”.

In sub-Clause 2(iv), delete “1212” and insert “1212SR”.

In sub-Clause 2(v), delete “1217” and insert “1217SR”.

In sub-Clause 3(ii)(a), delete “BS 873 : Part 1” and replace with “BSEN 12899”.

In sub-Clause 3(ii)(e), delete “BS 873 : Part 6” and replace with “BSEN 12899”.

In sub-Clause 4, delete “1208” and insert “1208SR”.

In sub-Clause 5, delete “Appendix 12/3” and insert “Clause 1212SR and 1213”.

1221 Preparation And Finish Of Metal And Other Surfaces

In sub-Clause 1, delete “where specified in Appendix 12/1”.

In sub-Clause 1, delete “BS 873 : Part 6” and replace with “BSEN 12899”.

In sub-Clause 2, delete “BS 873 : Part 6” and replace with “BSEN 12899”.

In sub-Clause 3, delete “BS 873 : Part 6” and replace with “BSEN 12899”.

In sub-Clause 3, delete “and be as described in Appendix 12/1”.

In sub-Clause 4, delete “BS 873 : Part 7” and replace with “BSEN 12899”.

In sub-Clause 4, delete “and be as described in Appendix 19/2”.

In sub-Clause 5, delete “in Appendix 19/2” and insert “by the *Client*”.

In sub-Clause 5, delete “BS 873 : Part 7” and replace with “BSEN 12899”.

In sub-Clause 6(i), delete “BS 873 : Part 6” and replace with “BSEN 12899”.

In sub-Clause 6(ii), delete “and colour as described in Appendix 19/2”.

In sub-Clause 7, delete “in Appendix 14/4” and insert “by the *Client*”.

In sub-Clause 8, delete “in Appendix 19/2” and insert “by the *Client*”.

In sub-Clause 9, delete “as described in Appendix 19/2”

In sub-Clause 9, delete “in Appendix 19/2” and insert “by the *Client*”

1701 Concrete – General

In sub-Clause 1, delete the second sentence.

1702 Concrete – Constituent Materials

In sub-Clause 1, delete “Appendix 17/4” and insert “Appendix 17/1”.

In sub-Clause 2, delete “Appendix 17/4” and insert “Appendix 17/1”.

In sub-Clause 3, delete “Appendix 17/4” and insert “Appendix 17/1”.

1704 Concrete – General Requirements

In sub-Clause 2, insert “as” before “described in Appendix 17/1”.

1707 Concrete – Conformity And Identity Testing

In sub-Clause 1, delete “Appendix 17/4” and insert “Appendix 17/1”.

1708 Concrete – Surface Finish

In sub-Clause 1, delete “When required in Appendix 17/3 and”.

In sub-Clause 4(i), Class F4, delete “or in other positions as described in Appendix 17/3”.

In sub-Clause 4(i), delete “Other classes. The finishes shall comply with the specific requirements described in Appendix 17/3.”

In sub-Clause 4(i), delete “Unless otherwise described in Appendix 17/3” and insert “Unless otherwise described in Appendix 17/1”.

In sub-Clause 4(ii), delete “Other classes. The finishes shall comply with the specific requirements described in Appendix 17/3.”

1710 Concrete – Construction General

In sub-Clause 1, delete “Appendix 17/4” and insert “Appendix 17/1” (twice).

In sub-Clause 2, delete “Appendix 17/4” and insert “Appendix 17/1”.

In sub-Clause 5, delete “shall be used unless otherwise specified in *contract* specific Appendix 17/4. Additional special curing requirements may be given in *contract* specific Appendix 17/4. shall be in *contract* specific Appendix 17/4”.

In sub-Clause 8 (ii), delete “Appendix 17/7” and insert “Appendix 17/1”.

In sub-Clause 8 (iii), delete “Appendix 17/7” and insert “Appendix 17/1”.

In sub-Clause 8 (iv), delete “Appendix 17/7” and insert “Appendix 17/1”.

1711 Concrete – Grouting And Duct Systems For Post-Tensioned Tendons

In sub-Clause 1, delete “in Appendix 17/6”.

In sub-Clause 1, delete “in accordance with the details described in Appendix 17/6”.

In sub-Clause 1, delete “unless specified otherwise in Appendix 17/6”.

In sub-Clause 6, delete “or such other requirement of *contract* specific Appendix 17/6”.

1717 Reinforcement – Welding

In sub-Clause 1, delete “unless permitted in Appendix 17/4” and insert “without the *Client’s* written approval”.

1725 Prestressing Tendons – Protection And Bond

In sub-Clause 1, delete “as described in Appendix 17/4”.

1727 Inspection And Testing Of Structures And Components

In sub-Clause 1, delete “and carried out as described in *contract* specific Appendix 17/4”.

1728 Geometrical Tolerances

In sub-Clause 1, delete “shall be as described in *contract* specific Appendix 17/4”.

1901 Introduction

In sub-Clause 4, delete “Appendix 19/5” and insert “Appendix 19/1”.

1902 Surface Preparation – General Requirements

In sub-Clause 1, delete “Appendix 19/5” and insert “Appendix 19/1”.

In sub-Clause 10, delete “Appendix 19/5” and insert “Appendix 19/1”.

1903 Surface Preparation – Materials And Methods

In sub-Clause 1, delete “Appendix 19/5” and insert “Appendix 19/1”.

In sub-Clause 12, delete “Appendix 19/5” and insert “Appendix 19/1”.

In sub-Clause 13, delete “Appendix 19/5” and insert “Appendix 19/1”.

In sub-Clause 20, delete “Appendix 19/5” and insert “Appendix 19/1”.

1906 Procedures For Treatment At Joints

In sub-Clause 2, delete “Appendix 19/5” and insert “Appendix 19/1”.

In sub-Clause 6, delete “Appendix 19/5” and insert “Appendix 19/1”.

In sub-Clause 7, delete “Appendix 19/5” and insert “Appendix 19/1”.

In sub-Clause 8, delete “Appendix 19/5” and insert “Appendix 19/1”.

In sub-Clause 12, delete “Appendix 19/2” and insert “Appendix 19/1”.

In sub-Clause 16, delete “Appendix 19/5” and insert “Appendix 19/1”.

In sub-Clause 23, delete “or Appendix 19/2”.

1909 Metal Coatings

In sub-Clause 1, delete “Appendix 19/5” and insert “Appendix 19/1”.

In sub-Clause 2, delete “Appendix 19/5” and insert “Appendix 19/1”.

In sub-Clause 3, delete “Appendix 19/5” and insert “Appendix 19/1”.

1911 Paint And Similar Protective Coatings

In sub-Clause 5, delete “Appendix 19/5” and insert “Appendix 19/1”.

In sub-Clause 5, delete “as named by” to the end.

1912 Testing Of Paints

In sub-Clause 1, delete “Appendix 19/5” and insert “Appendix 19/1”.

In sub-Clause 7, delete “Appendix 19/4”.

In sub-Clause 11, delete “Appendix 19/4”.

In sub-Clause 15, delete “Appendix 19/4”.

1914 Application Of Paint

In sub-Clause 3, delete “Appendix 19/2” and insert “Appendix 19/1”.

In sub-Clause 7, delete “Appendix 19/1”.

In sub-Clause 13, delete “Appendix 19/5”.

1915 Procedure Trials

In sub-Clause 1, delete “Appendix 19/5” and insert “Appendix 19/1”.

1917 Surfaces In Contact With Concrete

In sub-Clause 1, delete “Appendix 19/5” and insert “Appendix 19/1”.

In sub-Clause 3, delete “Appendix 19/5” and insert “Appendix 19/1”.

1918 Form Ha/P1 (New Works) Paint System Sheet (Appendix 19/1)

Form HAP2 Paint Data Sheet (Appendix 19/3)

In the title, delete “Appendix 19/1” and “Appendix 19/3”.

In sub-Clause 1, delete “Appendix 19/1” and “Appendix 19/3”. In sub-Clause 2, delete “Appendix 19/1”.

1920 Additional Requirements For The Protection Of Steel In Bridge Bearings

In sub-Clause 1, delete “Appendix 19/5” and insert “Appendix 19/1”. In sub-Clause 1, delete “Appendix 19/1 and with”.

In sub-Clause 2, delete “Appendix 19/1”.

2101 General

In sub-Clause 2, delete “and *contract* specific Appendix 21/1”

In sub-Clause 2, delete “and the performance requirements stated in *contract* specific Appendix 21/1.”

Delete sub-Clause 4.

In sub-Clause 5, delete “in accordance with requirements given in *contract* specific Appendix 21/1.”

In sub-Clause 6, delete “*contract* specific Appendix 21/1” and replace with “in the Task Order” (twice)

2102 Surface Preparation And Protection Against Corrosion

In subclause 1, delete “Unless otherwise stated in *contract* specific Appendix 21/1”

2302 Installation Of Bridge Deck Expansion Joints

In sub-Clause 5, delete “as described in Appendix 23/1”.

2303 Sealing Of Gaps

Delete sub-Clause 1 and renumber sub-Clauses 2 to 7 as 1 to 6

2404 Mortar

In sub-Clause 5, after “mechanically” insert “in a mortar mill”.

In sub-Clause 5, after the first sentence insert “The use of rotating drum mixers shall not be permitted.”

Insert new sub-Clause 7, as follows:

“The *Contractor* shall ensure that all constituent materials for the mortar are stored in an appropriate manner that will offer protection from adverse weather conditions.”

2417 Unreinforced Masonry Arch Bridges

In sub-Clause 4, delete “as described in Appendix 24/1”.

In sub-Clause 22, delete “to Clause 1043”.

In sub-Clause 25, delete “conforming to Clause 1043”.

In sub-Clause 28, delete “as described in Appendix 24/1”.

2601 Bedding Mortar

In sub-Clause 1(i), delete “Unless otherwise described in Appendix 26/2”.

In sub-Clause 1(i), delete “50 N/mm²” and insert “30 N/mm²”.

In sub-Clause 1(ii), delete “or as otherwise described in Appendix 26/2”.

In sub-Clause 1, delete “and Appendix 26/2 for other applications”.

In sub-Clause 3(v), delete “except where described in Appendix 26/2”.

2602 Concrete For Ancillary Purposes

In sub-Clause 1, delete “and any additional requirements in Appendix 26/1”. In sub-Clause 3, delete “where required in Appendix 26/1”.

In sub-Clause 4, delete “unless otherwise described in Appendix 26/1”.

In sub-Clause 6, delete “unless otherwise described in Appendix 26/1” (twice).

In sub-Clause 9, delete “unless otherwise described in Appendix 26/1”.