

APPENDIX A

Technical Approval Schedule (TAS)

Schedule of Documents Relating to Design of Highway Bridges and Structures

(All documents are taken to include revisions current as of 05 April 2019)

The Designer is responsible for ensuring that the standards and references given in the schedule are correct and up to date.

Eurocodes and associated UK National Annexes

Eurocode part	Title	Amendment / Corrigenda	
Eurocode 0			
Basis of structural design			
BS EN 1990:2002 +A1:2005	Eurocode 0: Basis of structural design	+A1:2005 Incorporating corrigenda December 2008 and April 2010	See BD100 Annex A for additional guidance.
NA to BS EN 1990:2002 + A1:2005	UK National Annex to Eurocode 0 Basis of structural design	National Amendment No.1	See BD100 Annex A for additional guidance.
Eurocode 1			
Actions on structures			
BS EN 1991-1-1:2002	Eurocode 1: Actions on structures. General Actions. Densities, self-weight, imposed load for buildings	Corrigenda December 2004 and March 2009	
NA to BS EN 1991-1-1:2002	UK National Annex to Eurocode 1: Actions on structures. General Actions. Densities, self-weight, imposed load for buildings	-	
BS EN 1991-1-3:2003 +A1:2015	Eurocode 1: Actions on structures. General Actions. Snow loads	+A1:2015 Incorporating corrigenda December 2004 and March 2009	
NA + A2:18 to BS EN 1991-1-3:2003+A1:2015	UK National Annex to Eurocode 1: Actions on structures. General Actions. Snow loads	+A2:2018 Incorporating corrigenda June 2007, December 2015 and October 2018	
BS EN 1991-1-4:2005 +A1:2010	Eurocode 1: Actions on structures. General Actions. Wind actions	+A1:2010 Corrigenda July 2009 and January 2010	
NA to BS EN 1991-1-4:2005 + A1:2010	UK National Annex to Eurocode 1: Actions on structures. General Actions. Wind actions	National Amendment No.1	
BS EN 1991-1-5:2003	Eurocode 1: Actions on structures. General Actions. Thermal actions	Corrigenda December 2004 and March 2009	
NA to BS EN 1991-1-5:2003	UK National Annex to Eurocode 1: Actions on structures. General Actions. Thermal actions	-	
BS EN 1991-1-6:2005	Eurocode 1: Actions on structures. General Actions. Actions during execution	Corrigenda July 2008, November 2012 and	

		February 2013	
NA to BS EN 1991-1-6:2005	UK National Annex to Eurocode 1: Actions on structures. General Actions. Actions during execution	-	
BS EN 1991-1-7:2006 +A1:2014	Eurocode 1: Actions on structures. General Actions. Accidental actions	+A1: 2014 Corrigendum February 2010	
NA+A1 to BS EN 1991-1-7:2006+A1:2014	UK National Annex to Eurocode 1: Actions on structures. Part 1-7 : Accidental actions	+A1:2014 Incorporating corrigenda August 2014 and November 2015	See BD100 for additional guidance.
BS EN 1991-2:2003	Eurocode 1: Actions on structures. Traffic loads on bridges	Corrigenda December 2004 and February 2010	See BD100 Annex A for additional guidance.
NA to BS EN 1991-2:2003	UK National Annex to Eurocode 1: Actions on structures. Traffic loads on bridges	Corrigendum No.1	See BD100 Annex A for additional guidance.
Eurocode 2	Design of concrete structures		
BS EN 1992-1-1:2004 + A1:2014	Eurocode 2: Design of concrete structures– Part 1-1: General rules and rules for buildings	Incorporating corrigendum January 2008, November 2010 and January 2014	
NA + A2:2014 to BS EN 1992-1-1:2004 + A1:2014	UK National Annex to Eurocode 2: Design of concrete structures – Part 1-1: General rules and rules for buildings		
Eurocode 7	Geotechnical design		
BS EN 1997-1:2004+A1:2013	Eurocode 7: Geotechnical design – Part 1 General rules	+A1:2013 Corrigendum February 2009	
NA+A1 to BS EN 1997-1:2004+A1:2013	UK National Annex to Eurocode 7: Geotechnical design – Part 1 General rules	+A1:2013 Incorporating Corrigendum No.1	
BS EN 1997-2:2007	Eurocode 7: Geotechnical design – Part 2 Ground investigation and testing	Corrigendum June 2010	
NA to BS EN 1997-2:2007	UK National Annex to Eurocode 7: Geotechnical design – Part 2 Ground investigation and testing	-	

Bsi Published Documents

For guidance only unless clauses are otherwise specified in BD 100/16 Annex B.

PD 6688-1-1:2011	Recommendations for the design of structures to BS EN 1991-1-1	See BD100 Annex B for additional guidance.
PD 6688-1-4:2015	Background paper to the UK National Annex to BS EN 1991-1-4	See BD100 Annex B for additional guidance.
PD 6688-1-7:2009 +A1:2014	Recommendations for the design of structures to BS EN 1991-1-7	See BD100 clause 2.17 and Annex B for additional guidance.
PD 6688-2:2011	Recommendations for the design of structures to BS EN 1991-2	See BD100 Annex B for additional guidance.
PD 6687-1:2010	Background paper to the UK National Annexes to BS EN 1992-1 and BS EN	See BD100 clauses 2.15, 2.16 and Annex B for

	1992-3	additional guidance.
PD 6694-1:2011	Recommendations for the design of structures subject to traffic loading to BS EN 1997-1	See BD100 Annex B for additional guidance.

Execution Standards referenced in British Standards or Eurocodes

BS EN 13670:2009 Incorporating corrigenda October 2015 and November 2015	Execution of concrete structures	
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Product Standards referenced in British Standards or Eurocodes

BS EN 206:2013	Concrete – Specification, performance, production and conformity	Corrigendum May 2014
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British Standards

BS 4449:2005+A3:2016	Steel for the reinforcement of concrete	No longer covers plain round bar. (See BS4482 up to 12mm dia, see BS EN 10025-1 for larger sizes and dowels. See BS EN 13877-3 for dowel bars in concrete pavements.)
BS 8002:2015	Code of practice for earth retaining structures	
BS 8004:2015	Code of practice for foundations	
BS 8500-1:2015+A2:2019	Concrete – Complementary British Standard to BS EN 206: Method of specifying and guidance for the specifier.	Incorporating Corrigendum No.1 Amendment +A2:2019
BS 8500-2:2015+A2:2019	Concrete – Complementary British Standard to BS EN 206 : Specification for constituent materials and concrete.	Amendment +A2:2019
BS 8666:2005	Scheduling, dimensioning, bending and cutting of steel reinforcement for concrete	Incorporating Amendment No.1

The Manual Contract Document for Highway Works (MCHW)

MCHW Volume 1: May 2017	Specification for Highway Works	
MCHW Volume 2: May 2017	Notes for guidance on the Specification for Highway Works	
MCHW Volume 3: February 2017	Highway Construction Details	

The Design Manual for Roads and Bridges (DMRB)

BD 2/12	Technical Approval of Highway Structures	
BA 57/01	Design for durability	Not to be used. See IAN 124/11 Annex C for additional guidance.

Interim Advice Notes

IAN 124/11 Annex C	Use of Eurocodes for the design of highway structures
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Miscellaneous

CIRIA C766	Control of cracking caused by restrained deformation in concrete	Supersedes C660
CIRIA C760	Guidance on embedded retaining wall design	
SP27	Settlement of Structures on Clay Soils	
Volume 83 of CIRIA report	Review of Behaviour of Piled Raft Foundations	
SP69	Engineering implications of rising groundwater levels in deep aquifer beneath London.	

Other Reports

- Specification for Piling and Embedded Retaining Walls, ICE.
- Foundation Engineering, Peck Hanson and Thorburn, 1967.
- Soil Mechanics in Engineering Practice, Terzaghi and Peck, 1967.
- Foundation Design and Construction, Tomlinson, 1998.
- Pile Design and Construction Practice, Tomlinson,
- Foundation, Analysis and Design, JE Bowles, 1988.
- Piling Engineering, Fleming, Weltman, Randolph, Elson, 1994.
- A new Method for Single Pile Settlement Prediction and Analysis, Geotechnique 1992.
- The effects of Changes in Effective Stress on a base grouted pile in sand, 1989.
- Pressuremeter proves its worth in London Docklands, Nicholson, Chapman, Morrison, 2002.
- Non-Linear Soil Stiffness in routine design, Atkinson, 2000.
- The SPT and Engineering properties of Glacial Materials – Guidance for economic design.
- Deep Excavations – A Practical Manual, Puller.