Notification Number: 2011/126/UK

# Interim Advice Note 124/10 Use of Eurocodes for the design of highway structures

Date received : 17/03/2011 End of Standstill : 20/06/2011

# Message

Message 001

Communication from the Commission - SG(2011) D/5600

Directive 98/34/EC

Notificación - Oznámení - Notifikation - Notifizierung - Teavitamine - Γνωστοποίηση - Notification - Notifica - Pieteikums - Pranešimas - Bejelentés - Notifika - Kennisgeving - Zawiadomienie - Notificacão - Hlásenie-Obvestilo - Ilmoitus - Anmälan - Нотификация : 2011/0126/UK - Notificare.

No abre el plazo - Nezahajuje odklady - Fristerne indledes ikke - Kein Fristbeginn - Viivituste perioodi ei avata - Καμμία έναρξη προθεσμίας - Does not open the delays - N'ouvre pas de délais - Non fa decorrere la mora - Neietekmē atlikšanu - Atidėjimai nepradedami - Nem nyitja meg a késéseket - Ma' jiftaħx il-perijodi ta' dawmien - Geen termijnbegin - Nie otwiera opóźnień - Nao inicia o prazo - Neotvorí oneskorenia - Ne uvaja zamud - Мääräaika ei ala tästä - Inleder ingen frist - Не се предвижда период на прекъсване - Nu deschide perioadele de stagnare - Nu deschide perioadele de stagnare.

(MSG: 201100600.EN)

#### 1. Structured Information Line

MSG 001 IND 2011 0126 UK EN 17-03-2011 UK NOTIF

#### 2. Member State

UK

#### 3. Department Responsible

Department for Business, Innovation and Skills Innovation & Enterprise Group 1 Victoria Street, London, SW1H 0ET.

Email: 9834@bis.gsi.gov.uk.

## 3. Originating Department

Highways Agency Research and Operational Guidance Division Woodlands Manton Lane Industrial Estate Bedford MK41 7LW

#### 4. Notification Number

2011/0126/UK - B00

#### 5. Title

Interim Advice Note 124/10 Use of Eurocodes for the design of highway structures

#### 6. Products Concerned

This Interim Advice Note provides guidance on the requirements for the implementation of Eurocodes for the design of highway structures (including geotechnical works) on trunk roads and motorways. Highway structures include bridges, subways, underpasses, culverts, gantries, masts and earth retaining structures.

#### 7. Notification Under Another Act

8. Main Content

This Interim Advice Note seeks to provide guidance for designers in the use of Eurocodes in undertaking the design of highway structures (including geotechnical works).

#### 9. Brief Statement of Grounds

The objective is to give designers basic requirements to ensure appropriate use of Eurocodes and to provide adequate levels of safety, control and a consistent approach on each scheme. It will at the same time allow designers to develop their understanding and use of Eurocodes for any particular scheme.

#### 10. Reference Documents - Basic Texts

References of the Basic Texts: BS 5400 Steel, concrete and composite bridges

BS 5628 Code of practice for the use of masonry

BS 8006-1 Code of practice for strengthened/reinforced soils and other fills

BS EN 1990:2002 + A1:2005 Eurocode 0: Basis of structural design

NA to BS EN 1990:2002 + A1:2005 UK National Annex to Eurocode 0 Basis of structural design

BS EN 1991-1-1:2002 Eurocode 1: Actions on structures. General Actions. Densities, self-weight, imposed load for buildings

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 Eurocode 1: Actions on structures. General Actions. Snow loads

NA to BS EN 1991-1-3:2003 UK National Annex to Eurocode 1: Actions on structures. General Actions. Snow loads

BS EN 1991-1-4:2005 Eurocode 1: Actions on structures. General Actions. Wind actions

NA to BS EN 1991-1-4:2005 UK National Annex to Eurocode 1: Actions on structures. General Actions. Wind actions

BS EN 1991-1-5:2003 Eurocode 1: Actions on structures. General Actions. Thermal actions

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 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 Eurocode 1: Actions on structures. General Actions. Accidental actions

NA to BS EN 1991-1-7:2006 UK National Annex to Eurocode 1: Actions on structures. Part 1-7: Accidental actions

BS EN 1991-2:2003 Eurocode 1: Actions on structures. Traffic loads on bridges

NA to BS EN 1991-2:2003 UK National Annex to Eurocode 1: Actions on structures. Traffic loads on bridges BS EN 1992-1-1:2004 Eurocode 2: Design of concrete structures—Part 1-1: General rules and rules for buildings

NA to BS EN 1992-1-1:2004 UK National Annex to Eurocode 2: Design of concrete structures – Part 1-1: General rules and rules for buildings

BS EN 1992-2:2005 Eurocode 2: Design of concrete structures – Part 2: Concrete bridges – Design and detailing rules

NA to BS EN 1992-2:2005 UK National Annex to Eurocode 2: Design of concrete structure – Part 2: Concrete bridges – Design and detailing rules

BS EN 1992-3:2006 Eurocode 2: Design of concrete structures – Part 3: Liquid retaining and containment structures

NA to BS EN 1992-3:2006 UK National Annex to Eurocode 2: Design of concrete structure – Part 3: Liquid retaining and containment structures

BS EN 1993-1-1:2005 Eurocode 3: Design of steel structures – Part 1-1 General rules and rules for buildings NA to BS EN 1993-1-1:2005 UK National Annex to Eurocode 3: Design of steel structures – Part 1-1 General rules and rules for buildings

BS EN 1993-1-3:2006 Eurocode 3: Design of steel structures – Part 1-3 General rules – Supplementary rules for cold-formed members and sheeting

NA to BS EN 1993-1-3:2006 UK National Annex to Eurocode 3: Design of steel structures – Part 1-3 Supplementary rules for cold-formed members and sheeting

BS EN 1993-1-4:2006 Eurocode 3: Design of steel structures – Part 1-4 General rules – Supplementary rules for stainless steels

NA to BS EN 1993-1-4:2006 UK National Annex to Eurocode 3: Design of steel structures – Part 1-4 Supplementary rules for stainless steels

BS EN 1993-1-5:2006 Eurocode 3: Design of steel structures – Part 1-5 Plated structural elements

NA to BS EN 1993-1-5:2006 UK National Annex to Eurocode 3: Design of steel structures – Part 1-5 Plated structural elements

BS EN 1993-1-6:2007 Eurocode 3: Design of steel structures – Part 1-6 Strength and stability of shell structures BS EN 1993-1-7:2007 Eurocode 3: Design of steel structures – Part 1-7 Plated structures subject to out of plane loading

BS EN 1993-1-8:2005 Eurocode 3: Design of steel structures - Part 1-8 Design of joints

NA to BS EN 1993-1-8:2005 UK National Annex to Eurocode 3: Design of steel structures – Part 1-8 Design of joints

BS EN 1993-1-9:2005 Eurocode 3: Design of steel structures - Part 1-9 Fatigue

NA to BS EN 1993-1-9:2005 UK National Annex to Eurocode 3: Design of steel structures – Part 1-9 Fatigue BS EN 1993-1-10:2005 Eurocode 3: Design of steel structures – Part 1-10 Material toughness and through-thickness properties

NA to BS EN 1993-1-10:2005 UK National Annex to Eurocode 3: Design of steel structures – Part 1-10 Material toughness and through thickness properties

BS EN 1993-1-11:2006 Eurocode 3: Design of steel structures – Part 1-11 Design of structures with tension components

NA to BS EN 1993-1-11:2006 UK National Annex to Eurocode 3: Design of steel structures – Part 1-11 Design of structures with tension components

BS EN 1993-1-12:2007 Eurocode 3: Design of steel structures – Part 1-12 Additional rules for the extension of EN 1993 up to steel grades S 700



NA to BS EN 1993-1-12:2007 UK National Annex to Eurocode 3: Design of steel structures – Part 1-12 Additional rules for the extension of EN 1993 up to steel grades S 700

BS EN 1993-2:2006 Eurocode 3: Design of steel structures - Part 2 Steel bridges

NA to BS EN 1993-2:2006 UK National Annex to Eurocode 3: Design of steel structures – Part 2 Steel bridges BS EN 1993-5:2007 Eurocode 3: Design of steel structures – Part 5 Piling

NA to BS EN 1993-5 National Annex to Eurocode 3: Design of steel structures – Part 5 Piling

BS EN 1994-1-1:2004 Eurocode 4: Design of composite steel and concrete structures – Part 1-1 General rules and rules for buildings

NA to BS EN 1994-1-1:2004 National Annex to Eurocode 4: Design of composite steel and concrete structures – Part 1-1 General rules and rules for buildings

BS EN 1994-2:2005 Eurocode 4: Design of composite steel and concrete structures – Part 2 General rules and rules for bridges

NA to BS EN 1994-2:2005 National Annex to Eurocode 4: Design of composite steel and concrete structures – Part 2 General rules and rules for bridges

BS EN 1995-1-1:2004 Eurocode 5: Design of timber structures – Part 1-1 General – common rules and rules for buildings

NA to BS EN 1995-1-1:2004 National Annex to Eurocode 5: Design of timber structures – Part 1-1 General – common rules and rules for buildings

BS EN 1995-2:2004 Eurocode 5: Design of timber structures – Part 2 Bridges

NA to BS EN 1995-2:2004 National Annex to Eurocode 5: Design of timber structures - Part 2 Bridges

BS EN 1996-1-1:2005 Eurocode 6: Design of masonry structures – Part 1-1 General rules for reinforced and unreinforced masonry structures

NA to BS EN 1996-1-1:2005 National Annex to Eurocode 6: Design of masonry structures – Part 1-1 General rules for reinforced and unreinforced masonry structures

BS EN 1996-2:2006 Eurocode 6: Design of masonry structures – Part 2 Design considerations, selection of materials and execution of masonry

NA to BS EN 1996-2:2006 National Annex to Eurocode 6: Design of masonry structures – Part 2 Design considerations, selection of materials and execution of masonry

BS EN 1996-3:2006 Eurocode 6: Design of masonry structures – Part 3 Simplified calculation methods for unreinforced masonry structures

NA to BS EN 1996-3:2006 National Annex to Eurocode 6: Design of masonry structures – Part 3 Simplified calculation methods for unreinforced masonry structures

BS EN 1997-1:2004 Eurocode 7: Geotechnical design – Part 1 General rules

NA to BS EN 1997-1:2004 National Annex to Eurocode 7: Geotechnical design – Part 1 General rules

BS EN 1997-2:2007 Eurocode 7: Geotechnical design – Part 2 Ground investigation and testing

NA to BS EN 1997-2:2007 UK National Annex to Eurocode 7: Geotechnical design – Part 2 Ground investigation and testing

BS EN 1998-1:2005 Eurocode 8: Design of structures for earthquake resistance – Part 1 General rules, seismic actions and rules for buildings

NA to BS EN 1998-1:2005 Eurocode 8: Design of structures for earthquake resistance – Part 1 General rules, seismic actions and rules for buildings

BS EN 1998-2:2005 Eurocode 8: Design of structures for earthquake resistance - Part 2 Bridges

NA to BS EN 1998-2:2005 National Annex to Eurocode 8: Design of structures for earthquake resistance – Part 2 Bridges

BS EN 1998-5:2004 Eurocode 8: Design of structures for earthquake resistance - Part 5 Foundations, retaining structures and geotechnical aspects

NA to BS EN 1998-5:2004 Eurocode 8: Design of structures for earthquake resistance - Part 5 Foundations, retaining structures and geotechnical aspects

BS EN 1999-1-1:2007 Eurocode 9: Design of aluminium structures— Part 1-1 General structural rules

NA to BS EN 1999-1-1:2007 Eurocode 9: Design of aluminium structures - Part 1-1 General structural rules BS EN 1999-1-3:2007 Eurocode 9: Design of aluminium structures - Part 1-3 Structures susceptible to fatigue

NA to BS EN 1999-1-3:2007 Eurocode 9: Design of aluminium structures - Part 1-3 Structures susceptible to

### fatigue

BS EN 1999-1-4:2007 Eurocode 9: Design of aluminium structures – Part 1-4 Cold formed structural sheeting NA to BS EN 1999-1-4:2007 Eurocode 9: Design of aluminium structures - Part 1-4 Cold formed structural sheeting

BS EN 1337 Structural bearings

BS EN 10025 Hot rolled products of structural steels – Part 5: Technical delivery conditions for structural steels with improved atmospheric corrosion resistance

BS EN 15050 Precast concrete products – Bridge elements

BS EN 1090-1 Execution of steel structures and aluminium structures - Part 1: Requirements for conformity assessment of structural components

BS EN 1090-2 Execution of steel structures and aluminium structures – Part 2: Technical requirements for the execution of steel structures

BS EN 1090-3 Execution of steel structures and aluminium structures – Part 3: Technical requirements for aluminium structures

BS EN 13670 Execution of concrete structures

PD 6688-1-4: Background paper to the UK National Annex to BS EN 1991-1-4

PD 6688-1-7: Recommendations for the design of structures to BS EN 1991-1-7

PD 6687-1:2010 Background paper to the UK National Annexes to BS EN 1992-1 and BS EN 1992-3

PD 6687-2:2008 Recommendations for the design of structures to BS EN 1992-2:2005

PD 6695-1-9:2008 Recommendations for the design of structures to BS EN 1993-1-9

PD 6695-1-10:2009 Recommendations for the design of structures to BS EN 1993-1-10

PD 6695-2:2008 Recommendation for the design of bridges to BS EN 1993

PD 6696-2:2007 Background paper to BS EN 1994-2 and the UK National Annex to BS EN 1994-2

PD 6698 Recommendations for the design of structures for earthquake resistance to BS EN 1998

PD 6703:2009 Structural bearings – Guidance on the use of structural bearings

PD 6705-2:2010 Recommendations on the execution of steel bridges to BS EN 1090-2

BA 26/94 Expansion Joints for Use in Highway Bridge Decks (TRIS reference 1994/88/UK)

BA 28/92 Evaluation of Maintenance Costs in Comparing Alternative Designs for Highway Structures

BA 41/98 The Design and Appearance of Bridges

BA 47/99 Waterproofing and Surfacing of Concrete Bridge Decks

BA 67/96 Enclosure of Bridges

BA 68/97 Crib Retaining Walls (TRIS reference 1995/153/UK)

BA 82/00 Formation of Continuity Joints in Bridge Decks

BA 85/04 Coatings for Concrete Highway Structures & Ancillary Structures

BA 92/07 The Use of Recycled Concrete Aggregates in Structural Concrete

BD 2/05 Technical Approval of Highway Structures

BD 7/01 Weathering Steel for Highway Structures

BD 10/97 Design of Highway Structures in Areas of Mining Subsidence

BD 12/01 Design of Corrugated Steel Buried Structures with Spans Greater than 0.9 Metres and up to 8.0 Metres

BD 29/04 Design Criteria for Footbridges

BD 33/94 Expansion Joints for Use in Highway Bridge Decks (TRIS reference 1994/87/UK)

BD 35/06 Quality Assurance Scheme for Paints and Similar Protective Coatings

BD 36/92 Evaluation of Maintenance Costs in Comparing Alternative Designs for Highway Structures

BD 43/03 The Impregnation of Reinforced and Prestressed concrete Highway Structures using Hydrophobic Pore-Lining Impregnants

BD 45/93 Identification Marking of Highway Structures

BD 47/99 Waterproofing and Surfacing of Concrete Bridge Decks

BD 51/98 Portal and Cantilever Signs/Signal Gantries

BD 62/07 As Built, Operational and Maintenance Records for Highway Structures

BD 65/97 Design Criteria for Collision Protection Beams

BD 67/96 Enclosure of Bridges

BD 68/97 Crib Retaining Walls (TRIS reference 1995/153/UK)

BD 70/03 Strengthened/Reinforced Soils and Other Fills for Retaining Walls and Bridge Abutments. Use of BS 8006: 1995

BD 78/99 Design of Road Tunnels

BD 82/00 Design of Buried Rigid Pipes

BD 90/05 Design of FRP Bridges and Highway Structures

BD 94/07 Design of Minor Structures

HA 66/95 Environmental Barriers

HD 45/09 Road Drainage and Water Environment

TD 19/06 Requirement for Road Restraint Systems

TD 27/05 Cross-Sections and Headrooms

Interim Advice Note 05/96 BD 24/92 The Design of Concrete Highway Bridges and Structures. Use of BS 5400: Part 4:1990

Interim Advice Note 70/06 Implementation Of New Reinforcement Standards (BS 4449:2005, BS 4482:2005, BS 4483:2005 and BS 8666:2005)

Interim Advice Note 85/07 Design Of Passively Safe Portal Signal Gantries

Interim Advice Note 86/07 Amendments To Design Requirements For Portal And Cantilever Sign/Signal

Interim Advice Note 95/07 Revised guidance regarding the use of BS8500(2006) for the design and construction of structures using concrete

Interim Advice Note 104/07 The Anchorage of Reinforcement & Fixings in Hardened Concrete

CIRIA Document C543 Bridge Detailing Guide

CIRIA Document C660 Early-age thermal crack control in concrete

CIRIA Document C686 Safe access for maintenance and repair

#### 11. Invocation of the Emergency Procedure

No

#### 12. Grounds for the Emergency

# 13. Confidentiality

No

#### 14. Fiscal measures

#### 15. Impact assessment

Impact Assessment not available.

#### 16. TBT and SPS aspects

TBT aspect

No - The draft has no significant impact on international trade

SPS aspect



# EUROPEAN COMMISSION GROWTH DIRECTORATE-GENERAL

**Single Market for goods** Prevention of Technical Barriers

No - The draft is not a sanitary or phytosanitary measure

Catherine Day General Secretary European Commission

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