COMPETITION FOR THE DESIGN, CONSTRUCTION,

COMPLETION AND MAINTENANCE OF THE

A9: BERRIEDALE BRAES IMPROVEMENT SCHEME

VOLUME 3 OF 5

EMPLOYER'S REQUIREMENTS

PART 3 – APPENDICES TO THE EMPLOYER'S REQUIREMENTS

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COMPETITION FOR

THE DESIGN, CONSTRUCTION, COMPLETION AND MAINTENANCE OF THE

A9 : BERRIEDALE BRAES IMPROVEMENT SCHEME

CONTRACT NUMBER TS/MTRIPS/WKS/2017/06

INVITATION TO SUBMIT FINAL TENDER

VOLUME 3 OF 5

EMPLOYER'S REQUIREMENTS

PART 3 – APPENDICES TO THE EMPLOYER'S REQUIREMENTS

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TRANSPORT SCOTLAND

COMPETITION FOR

THE DESIGN, CONSTRUCTION, COMPLETION AND MAINTENANCE OF A9: BERRIEDALE BRAES IMPROVEMENT SCHEME

TS/MTRIPS/WKS/2017/06

INVITATION TO SUBMIT FINAL TENDER

VOLUME 3 OF 5

EMPLOYER'S REQUIREMENTS

PART 3 – APPENDICES TO THE EMPLOYER'S REQUIREMENTS

DOCUMENT ISSUE RECORD

I hereby confirm that this is the current version of the Employer's Requirements and supersedes all previous issues of such document by the Employer.

Signed .....

Name (Block capitals) .....

Date .....

Participant .....

Copy of signed page shall be sent to, Transport Scotland, [REDACTED].

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1. APPENDICES TO THE EMPLOYER'S REQUIREMENTS

APPENDIX	DESCRIPTION
A	Requirements for Road(s)
B	Requirements for Principal Structure(s)
C	Certificates
D	Departures from Standards Proformas
E	Undertakers Notices
F	Local Council Design Standards and Guidelines
G	Not Used
H	Not Used
I	Consultation Matrix
J	Not Used
K	Stage 1 Safety Audit Report
L	Walking, Cycling and Horse-Riding Review
M	Amendments to Design Manual for Roads And Bridges
N	As Constructed Requirements
O	Schedule of Supplementary Requirements
P	Structures Design Statement
Q	Environmental Assessment Documents
R	Details of Additional Land Required by the Contractor for the Works
S	Statutory Orders and Schemes Schedules
T	Defect Reporting
U	Traffic Volumes
V	Properties And Structures Requiring Condition Surveys
W	Procedure for Structures Assessment
X	Not Used
Y	Rock Engineering Guides to Good Practice
Z	Earthworks Design Statement
AA	Strengthened Earthworks Appraisal Form (SEAF)
AB	Outline Employer's Communication Protocol
AC	Employer's Information Requirements

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APPENDIX A

THIS IS APPENDIX A TO THE EMPLOYER'S REQUIREMENTS

REQUIREMENTS FOR ROAD(S)

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Table 1 - Requirements for Roads

Road Name	Road Located between Points (refer to Note 1)	Category TD9 Table 4 of the DMRB	Type of Road TD9 TD27 of the DMRB	Min Carriageway Width (metres) (refer to Notes 2 and 8)	Hard shoulder/ Hard strip Width (metres) (refer to Note 8)		Minimum Verge Width (metres) (refer to Notes 3 and 6)		Kerb Required (refer to Note 5)	Minimum Central Reserve/Strip Width (metres)	NMU Facility Required/ Width (metres) See Table 2	Design Speed (kph)
					Near-side	Off-side	Near-side	Off-side				
Trunk Roads												
New A9 Trunk Road	N1 to N2	2	S2	6.0	1.0	1.0	1.65	1.65	No	N/A	N/A	85
New A9 Trunk Road	N2 to N3	2	S2	6.0	1.0	1.0	1.65	1.65	No	N/A	N/A	85

NOTES TO TABLE 1

1. Reference Points are as identified on Drawing Number 47066861-SHT-05-0000-CH-0002, as listed in Appendix 0/4 of the Specification.
2. Allowance shall be made for widening on curves for vehicle swept paths, or to accommodate junction requirements.
3. Verge widths do not include hardstrips or hardshoulders. Additional verge width may be required to accommodate road restraint systems installation, footways, cycleways, visibility splays and otherwise. Offside verge width may be narrowed to 1.4m between approximate chainages 485m to 500m due to limited land.
4. "N/A" means 'not applicable'. "A/E" means 'as existing'.
5. Where 'No' has been specified, kerbs are still required at Junctions (up to corner radii tangent points), and at other locations in accordance with the DMRB and as required for NMU facilities at carriageway edges and for drainage purposes.
6. "N/S" means nearside of carriageway. "O/S" means offside of carriageway. On roads where there is to be two-way traffic N/S relates to the

direction of travel which corresponds with increasing chainage.

7. Road designed in accordance with DMRB Volume 6, Section 1 (TD 9/93 and 27/05), Section 2 (TD 42/95) and Section 3 (TD 69/07).
8. Between Reference Points N2 and N3 the lengths of 1.0m wide hard strips shall be maximised and an absolute minimum paved width of 7.0m shall be maintained.

Table 2 - Requirements for Non-Motorised User Facilities

Reference Point(s). (refer to Note 1)	**Approximate Location & Details**	**Width (metres)**	**Non-Motorised Users Provision**	**Crossing Provision/Termination Details**
CP1 – CP2	Footpath to the Cemetery from the proposed lay-by (LB1)	2.0m with 0.5m verges	2m wide footpath with viewpoint	N/A

NOTES TO TABLE 2:

1. Reference point locations identified on drawing numbers 47066861-SHT-05-0000-CH-0002, as listed in Appendix 0/4 of the Specification.
2. Surfacing requirements for NMU facilities shall be designed in accordance with Section 4.2.8 of Part 1 and Section 4.2.8 of Part 2 of these Employers Requirements.

Table 3 - Requirement for Accesses

Reference Point(s). (refer to Note 1)	**Name and/or Approximate Location**	**Minimum Width (metres)**	**Surfaced / Unsurfaced**	**Minimum verge Widths (metres)**	**Further Details**
A1 – A2	Maintenance Access Track to SUDS Basin at Berriedale Water.	3.0	Un-surfaced	1.0	
A3 – A4	Access to White House	3.0	Surfaced	N/A	

NOTES TO TABLE 3:

1. Reference point locations identified on drawing numbers 47066861-SHT-05-0000-CH-0002, as listed in Appendix 0/4 of the Specification.
2. Minimum pavement construction shall be in accordance with Section 4.2.7 of Parts 1 and 2 of these Employers Requirements.
3. Refer to Appendix 1/15 of Specification for further details of Accommodation Works access tracks.
4. Accesses designed in accordance with DMRB Volume 6, Section 2, TD 41/95

Table 4 - Requirement for Lay-Bys

Reference Point(s). (refer to Note 1)	**Name and/or Approximate Location**	**Minimum Width (metres)** (refer to Note 2)	**Back Length (metres)**	**Minimum verge Width (metres)**	**Further Details**
LB1	Surfaced Type B on northbound carriageway from trunk road Ch.245 to Ch. 365 approximately.	3.6	30	2.5	

NOTES TO TABLE 4:

1. Reference point locations identified on drawing numbers 47066861-SHT-05-0000-CH-0002, as listed in Appendix 0/4 of the Specification.
2. Minimum width has been measured from back of hard strip to back of lay-by.
3. Lay-by designed in accordance with Roads for All – Good Practice Guide for Roads guidelines

APPENDIX B

THIS IS APPENDIX B TO THE EMPLOYER'S REQUIREMENTS

REQUIREMENTS FOR PRINCIPAL STRUCTURE(S)

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Table 1 - Requirements for Principal Structure(s)

Structure Reference Number (See Note 1)	Structure Title	Approximate Chainage / Location	Description and Purpose of Structure	Minimum Cross-sectional/Internal Dimensions (metres)	Design Check Category	Required Live Loading	Abnormal Indivisible Load	Live Road Traffic to be Carried.	Vehicle Parapet Type (where required)	Services & Service Ducts to be provided
ST01	Buried Piled Sub-Structure	Mainline chainage 65m to 115m O/S side of earthworks	Buried Piled Sub-Structure The purpose of the structure is to retain existing ground, support the new earthworks and the A9 infrastructure behind the wall and prevent instability of the new infrastructure if ground instability occurs in the coastal slopes in front of the wall.	n/a	Category 3 - As per BD2 of DMRB	For new Structures: LM1, LM2, in accordance with UK National Annex NA to BS EN 1991-2:2003 and accidental loading in accordance with cl. 4.7.3 of BS EN 1991-2:2003.	LM3 SV80, SV100 and SV196 in accordance with BS EN 1991-2 & its UK National Annex.	For all permitted classes of vehicular traffic, cyclists and pedestrians	n/a	n/a

Notes:

1. 'The location of structure can be identified on the Scheme Reference Drawing listed in Appendix 0/4 of the Specification.
2. "N/S" means nearside of carriageway. "O/S" means offside of carriageway. On roads where there is to be two-way traffic N/S relates to the direction of travel which corresponds with the increasing reference numbers (i.e. R19 – R20).

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APPENDIX C

THIS IS APPENDIX C TO THE EMPLOYER'S REQUIREMENTS

CERTIFICATES

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APPENDIX C

CERTIFICATES

Description	Reference
Design Interim Certificate: Structures	DICS
Design Check Interim Certificate: Structures	DCICS
Design Certificate: Structures	DCS
Design Check Certificate: Structures	DCCS
Design Interim Certificate: Earthworks	DIC( )
Design Check Interim Certificate: Earthworks	DCIC( )
Design Certificate: Earthworks	DC( )
Design Check Certificate: Earthworks	DCC( )
Design Interim Certificate: Road Restraint Systems	DIC(B)
Design Check Interim Certificate: Road Restraint Systems	DCIC(B)
Design Certificate: Road Restraint Systems	DC(B)
Design Check Certificate: Road Restraint Systems	DCC(B)
Design Interim Certificate: Other Part(s) of Design or Design Elements	DIC( )
Design Check Interim Certificate: Other Part(s) of Design or Design Elements	DCIC( )
Design Certificate: Other Part(s) of Design or Design Elements	DC( )
Design Check Certificate: Other Part(s) of Design or Design Elements	DCC( )
Interim Construction Certificate	ICC
Final Construction Certificate	FCC
Interim Post Construction Certificate	IPCC
Final Post Construction Certificate	FPCC
Consultation Certificate	CNC
Road Safety Audit Certificate	RSAC
Stage 2 Road Safety Audit Certificate: For Temporary Traffic Management Schemes	RSAC(TTM2)
Stage 3 Road Safety Audit Certificate: For Temporary Traffic Management Schemes	RSAC(TTM3)
Temporary Works Certificate	TWC
Provenance Certificate	PC

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DESIGN INTERIM CERTIFICATE: STRUCTURES

CERTIFICATE NO: DICS.....……..……...

1. We hereby certify to the Employer in respect of the design of the following part of the Design or Design Element namely

.....……..(Name of Structure)

that reasonable professional skill and care has been taken by us with a view to securing that the part of the Design or Design Element:-

i. complies with the Employer's Requirements.

ii. has been accurately translated into the construction drawings and bar bending schedules bearing the unique numbers listed below:

iii. is not detrimental to the whole Design or Design Element and shall not affect the completion of the Design Certificate(s).

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

Signed: .....…….. Firm: .....….....
DESIGNER (Team leader for Designer)

Name (Block Capitals): .....…… …. Date: .....……..…….....

Signed:.....…..…… Firm: .....….....
CONTRACTOR (Agent).

Name (Block Capitals): .....……..... Date: ...…….....

2. Receipt of this Certificate is acknowledged

Signed: .....……..... Date: .....….....
on behalf of the ENGINEER

DESIGN CHECK INTERIM CERTIFICATE: STRUCTURES

CERTIFICATE NO: DCICS.....……..…...

1. We hereby certify to the Employer in respect of the design of the following part of the Design or Design Element namely

   .....……..……..(Name of Structure)

   that reasonable professional skill and care has been taken by us with a view to securing that the part of the Design or Design Element:-

   i. complies with the Employer's Requirements.

   ii. has been accurately translated into the construction drawings and bar bending schedules bearing the unique numbers listed below:

   iii. is not detrimental to the whole Design or Design Element and shall not affect the completion of the Check Certificate(s).

   We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

   Signed: .....……. Firm: .....….....
   CHECKER (Team leader for Checker)

   Name (Block Capitals): ..... Date: .....…….....

   Signed:.....……..…... Firm: .....….....
   CONTRACTOR (Agent)

   Name (Block Capitals): ..... Date: .....…….....

2. Receipt of this Certificate is acknowledged

   Signed: .....……..... Date: .....….....
   on behalf of the ENGINEER

DESIGN CERTIFICATE: STRUCTURES

CERTIFICATE NO: DCS.....……..…...

1. We hereby certify to the Employer in respect of the design of the following part of the Design or Design Element namely

.....……..……. (Name of Structure)

that reasonable professional skill and care has been taken by us with a view to securing that the part of the Design or Design Element:-

i. complies with the Employer's Requirements.

ii. has been accurately translated into the construction drawings and bar bending schedules bearing the unique numbers listed below:

iii. is not detrimental to the whole Design or Design Element.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

Signed: .....…….. Firm.....
DESIGNER (Team leader for Designer)

Name (Block Capitals): .....….. Date: .....…….....

Signed:.....…… Firm.....….....
CONTRACTOR (Agent)

Name (Block Capitals): ..... Date: .....…….....

2 Receipt of this Certificate is acknowledged

Signed: .....…… Date: .....
on behalf of the ENGINEER

DESIGN CHECK CERTIFICATE: STRUCTURES

CERTIFICATE NO: DCCS.....……

1. We hereby certify to the Employer in respect of the check of the following part of the Design or Design Element namely

   .....……..…… (Name of Structure)

   that reasonable professional skill and care has been taken by us in carrying out the independent check of the part of the Design or Design Element in accordance with the procedures described in the Design Manual for Roads and Bridges with a view to securing that the part of the Design or Design Element:-

   i. complies with the Employer's Requirements.

   ii. has been accurately translated into the construction drawings and bar bending schedules bearing the unique numbers listed below:

   iii. is not detrimental to the whole Design or Design Element.

   We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

   Signed: .....…… Firm: .....
   CHECKER (Team leader for Checker)

   Name (Block Capitals): ..... Date: .....……

   Signed:.....…….. Firm: .....….....
   CONTRACTOR (Agent)

   Name (Block Capitals): ..... Date: .....…….....

2. Receipt of this Certificate is acknowledged

   Signed: .....……..…….. Date: .....….....
   on behalf of the ENGINEER

DESIGN INTERIM CERTIFICATE: EARTHWORKS

CERTIFICATE NO: DIC( )*.....

1. We hereby certify to the Employer in respect of the check of the following further divided part of the Design or Design Element namely

.....(Name of further divided part of the Earthworks)

.....(Name of part of Earthworks or Earthwork's Element)

that reasonable professional skill and care has been taken by us with a view to securing that the further divided part of the Design or Design Element:-

i. complies with the Employer's Requirements.

ii. has been designed in accordance with the required Design Basis documents listed and dated below.

iii. has been accurately translated into the construction drawings and other Design documents bearing the unique numbers listed below:

iv. is not detrimental to the Whole Design or Design Element and shall not affect the completion of the Design Certificate(s).

v. has been the subject of a Geotechnical Design Report and that the conclusions of that report have been taken into account in the further divided part of the Design or Design Element.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

Signed: ..... Firm.....
DESIGNER (Team leader for Designer)

Name (Block Capitals): ..... Date: .....

Signed:..... Firm.....
CONTRACTOR (Agent)

Name (Block Capitals): ..... Date: .....

2 Receipt of this Certificate is acknowledged

Signed: ..... Date: .....
on behalf of the ENGINEER

* Insert Description of part of Design or Design Element:

Earthworks	(E)	Piling	(P)
Grouting Works	(G)		

DESIGN CHECK INTERIM CERTIFICATE: EARTHWORKS

CERTIFICATE NO: DCIC( )*.....

1. We hereby certify to the Employer in respect of the check of the following further divided part of the Design or Design Element namely

.....(Name of further divided part of the Earthworks)

.....(Name of part of Earthworks or Earthwork's Element)

that reasonable professional skill and care has been taken by us in carrying out the independent check of the Design or Design Element (including the Geotechnical Design Report referred to in (v) below) with a view to securing that the further divided part of the Design or Design Element:-

i. complies with the Employer's Requirements.

ii. has been checked in accordance with the required Design Basis documents listed and dated below.

iii. has been accurately translated into the construction drawings and other design documents bearing the unique numbers listed below:

iv. is not detrimental to the whole Design or Design Element and shall not affect the completion of the Check Certificate(s).

v. has been the subject of a Geotechnical Design Report and that the conclusions of that report have been taken into account in the further divided part of the Design or Design Element.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

Signed: ..... Firm.....
CHECKER (Team leader for Checker)

Name (Block Capitals): ..... Date: .....

Signed:..... Firm.....
CONTRACTOR (Agent)

Name (Block Capitals): ..... Date: .....

2. Receipt of this Certificate is acknowledged

Signed: ..... Date: .....
on behalf of the ENGINEER

* Insert Description of part of Design or Design Element:

Earthworks	(E)	Piling	(P)
Grouting Works	(G)		

DESIGN CERTIFICATE: EARTHWORKS

CERTIFICATE NO: DC( )*.....

1. We hereby certify to the Employer in respect of the design of the following part of the Design or Design Element namely

   .....(Name of Earthworks or Earthwork's Element)

   that reasonable professional skill and care has been taken by us with a view to securing that the part of the Design or Design Element:-

   i. complies with the Employer's Requirements.

   ii. has been designed in accordance with the required Design Basis documents listed and dated below.

   iii. has been accurately translated into the construction drawings and other Design documents bearing the unique numbers listed below:

   iv. is not detrimental to the whole Design or Design Element.

   v. has been the subject of a Geotechnical Design Report and that the conclusions of that report have been taken into account in the Design or Design Element.

   We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

   Signed: .....…….... Firm.....
   DESIGNER (Team leader for Designer)

   Name (Block Capitals): ..... Date: .....…….....

   Signed:.....……. Firm.....
   CONTRACTOR (Agent)

   Name (Block Capitals): ..... Date: .....…….....

2. Receipt of this Certificate is acknowledged

   Signed: ……..... Date: .....
   on behalf of the ENGINEER

   * Insert Description of part of Design or Design Element:

Earthworks	(E)	Piling	(P)
Grouting Works	(G)		

DESIGN CHECK CERTIFICATE: EARTHWORKS

CERTIFICATE NO: DCC( )*.....

1. We hereby certify to the Employer in respect of the check of the following part of the Design or Design Element namely

.....(Name of Earthworks or Earthwork's Element)

that reasonable professional skill and care has been taken by us in carrying out the independent check of the Design or Design Element (including the Geotechnical Design Report referred to in (v) below) with a view to securing that the part of the Design or Design Element:-

i. complies with the Employer's Requirements.

ii. has been checked in accordance with the required Design Basis documents listed and dated below.

iii has been accurately translated into the construction drawings and other Design documents bearing the unique numbers listed below:

iv. is not detrimental to the whole Design or Design Element.

v. has been the subject of a Geotechnical Design Report and that the conclusions of that report have been taken into account in the Design or Design Element.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

Signed:..... Firm.....
CHECKER (Team leader for Checker)

Name (Block Capitals): ..... Date: .....

Signed:..... Firm.....
CONTRACTOR (Agent)

Name (Block Capitals): ..... Date:..... .....

2. Receipt of this Certificate is acknowledged

Signed: ..... Date: .....
on behalf of the ENGINEER

* Insert Description of part of Design or Design Element:

Earthworks	(E)	Piling	(P)
Grouting Works	(G)		

DESIGN INTERIM CERTIFICATE: ROAD RESTRAINT SYSTEMS

CERTIFICATE NO: DIC(B).....

1. We hereby certify to the Employer in respect of the design of the following further divided part of the Design or Design Element namely

.....(Name of further divided part of Road Restraint System or Road Restraint System Element)

.....(Name of part of Road Restraint System or Road Restraint System Element)

that reasonable professional skill and care has been taken by us with a view to securing that the further divided part of the Design or Design Element:-

i. complies with the Employer's Requirements.

ii. has been accurately translated into the construction drawings and other Design documents bearing the unique numbers listed below:

iii. is not detrimental to the whole Design or Design Element and shall not affect the completion of the Design Certificate(s).

iv. that all aspects of the Design or Design Element of the Road Restraint System on the Contract have been developed by means of a risk assessment approach.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

Signed: .....…….. Firm.....
DESIGNER (Team leader for Designer)

Name (Block Capitals): ..... Date: .....…….....

Signed:.....…….. Firm.....
CONTRACTOR (Agent)

Name (Block Capitals): ..... Date: .....…….....

2. Receipt of this Certificate is acknowledged

Signed: .....……..... Date: .....
on behalf of the ENGINEER

DESIGN CHECK INTERIM CERTIFICATE: ROAD RESTRAINT SYSTEMS
CERTIFICATE NO: DCIC(B).....

1. We hereby certify to the Employer in respect of the check of the following further divided part of the Design or Design Element namely

.....(Name of further divided part of Road Restraint System or Road Restraint System Element)

.....(Name of part of Road Restraint System or Road Restraint System Element)

that reasonable professional skill and care has been taken by us in carrying out the independent check of the Design or Design Element with a view to securing that the further divided part of the Design or Design Element:-

i. complies with the Employer's Requirements.

ii. has been accurately translated into the construction drawings and other design documents bearing the unique numbers listed below:

iii. is not detrimental to the whole Design or Design Element and shall not affect the completion of the Check Certificate(s).

iv. that all aspects of the Design or Design Element of the Road Restraint System in the Contract have been developed by means of a risk assessment approach.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

Signed: .....Firm.....
CHECKER (Team leader for Checker)

Name (Block Capitals): ..... Date: .....

Signed:..... Firm.....
CONTRACTOR (Agent)

Name (Block Capitals): ..... Date: .....

2. Receipt of this Certificate is acknowledged

Signed: ..... Date: .....
on behalf of the ENGINEER

DESIGN CERTIFICATE: ROAD RESTRAINT SYSTEM

CERTIFICATE NO: DC(B)…….....

1. We hereby certify to the Employer in respect of the design of the following part of the Design or Design Element namely

.....(Name of part of Road Restraint System or Road Restraint System Element)

that reasonable professional skill and care has been taken by us with a view to securing that the further divided part of the Design or Design Element:-

i. complies with the Employer's Requirements.

ii. has been accurately translated into the construction drawings and other Design documents bearing the unique numbers listed below:

iii. is not detrimental to the whole Design or Design Element and shall not affect the completion of the Design Certificate(s).

iv. that all aspects of the Design or Design Element of the Road Restraint System in the Contract have been developed by means of a risk assessment approach.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

Signed: .....……..... Firm.....
DESIGNER (Team leader for Designer)

Name (Block Capitals): .....… Date: .....…….....

Signed:.....……..... Firm.....
CONTRACTOR (Agent)

Name (Block Capitals): ..... Date: .....…….....

2. Receipt of this Certificate is acknowledged

Signed: .....……..... Date: .....
on behalf of the ENGINEER

DESIGN CHECK CERTIFICATE: ROAD RESTRAINT SYSTEMS

CERTIFICATE NO: DCC(B).....

1. We hereby certify to the Employer in respect of the check of the following part of the Design or Design Element namely

.....(Name of part of Road Restraint System or Road Restraint System Element)

that reasonable professional skill and care has been taken by us in carrying out the independent check of the part of the Design or Design Element with a view to securing that the part of the Design or Design Element:-

i. complies with the Employer's Requirements.

ii. has been accurately translated into the construction drawings and other Design documents bearing the unique numbers listed below:

iii. is not detrimental to the whole Design or Design Element

iv. that all aspects of the Design or Design Element of the Road Restraint System in the Contract have been developed by means of a risk assessment approach.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

Signed: ..... ……. Firm.....
CHECKER (Team leader for Checker)

Name (Block Capitals): ..... Date: .....

Signed:..... Firm.....
CONTRACTOR (Agent)

Name (Block Capitals): ..... Date: .....

2. Receipt of this Certificate is acknowledged

Signed: ..... Date: .....
on behalf of the ENGINEER

DESIGN INTERIM CERTIFICATE: OTHER PART(S) OF THE DESIGN OR DESIGN ELEMENT
CERTIFICATE NO: DIC( )*....……

1. We hereby certify to the Employer in respect of the design of the following further divided part of the Design or Design Element namely

....……..……..(Name of further divided part of Design or Design Element)

.....……..(Name of part of Design or Design Element)

that reasonable professional skill and care has been taken by us with a view to securing that the further divided part of the Design or Design Element:-

i. complies with the Employer's Requirements.

ii. has been accurately translated into the construction drawings and other Design documents bearing the unique numbers listed below.

iii. is not detrimental to the whole Design or Design Element and shall not affect the completion of the Design Certificate(s).

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

Signed: .....…..……..... Firm: .....…….....
DESIGNER (Team leader for Designer)

Name (Block Capitals): .....…….. Date: .....…….....

Signed:.....…….....…….... Firm: .....…….....
CONTRACTOR (Agent)

Name (Block Capitals): .....…….... Date: .....…….....

2. Receipt of this Certificate is acknowledged

Signed: .....…..….. Date: .....…….....
on behalf of the ENGINEER

* Insert Description of part of Design or Design Element:

Fencing and Environmental Barriers	(F)	Electrical Installation	(I)
Drainage	(D)	Communication Systems	(C)
Road Pavements	(P)	Environmental and Landscape	(E)
Road Layout	(R)	Undertakers	(U)
Kerb, Footways and Paved Areas	(K)	Private Apparatus Owners	(O)
Signs and Road Markings	(S)	Accommodation Works	(A)
Lighting	(L)		

DESIGN CHECK INTERIM CERTIFICATE: OTHER PART(S) OF THE DESIGN OR DESIGN ELEMENT

CERTIFICATE NO: DCIC( )*.....

1. We hereby certify to the Employer in respect of the check of the following further divided part of the Design or Design Element namely

……..…….....(Name of further divided part of Design or Design Element)

.....……..……...(Name of part of Design or Design Element)

that reasonable professional skill and care has been taken by us in carrying out the independent check of the Design or Design Element with a view to securing that the further divided part of the Design or Design Element.

i. complies with the Employer's Requirements.

ii has been accurately translated into the construction drawings and other design documents bearing the unique numbers listed below:

iii. is not detrimental to the whole Design or Design Element and shall not affect the completion of the Check Certificate(s).

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

Signed: .....……..... Firm: .....
CHECKER (Team leader for Checker)

Name (Block Capitals): ..... Date: .....…….....

Signed:.....……..... Firm: .....
CONTRACTOR (Agent)

Name (Block Capitals): ....…. Date: .....…….....

2. Receipt of this Certificate is acknowledged

Signed: .....……..... Date: .....
on behalf of the ENGINEER

* Insert Description of part of Design or Design Element:

Fencing and Environmental Barriers	(F)	Electrical Installation	(I)
Drainage	(D)	Communication Systems	(C)
Road Pavements	(P)	Environmental and Landscape	(E)
Road Layout	(R)	Undertakers	(U)
Kerb, Footways and Paved Areas	(K)	Private Apparatus Owners	(O)
Signs and Road Markings	(S)	Accommodation Works	(A)
Lighting	(L)		

DESIGN CERTIFICATE: OTHER PART(S) OF THE DESIGN OR DESIGN ELEMENT
CERTIFICATE NO: DC( )*....……

1. We hereby certify to the Employer in respect of the design of the following part of the Design or Design Element namely:

….....……(Name of Part of the Design or Design Element)

that reasonable professional skill and care has been taken by us with a view to securing that the part of the Design or Design Element:-

i. complies with the Employer's Requirements.

ii has been accurately translated into the construction drawings and other design documents bearing the unique numbers listed below:

iii. is not detrimental to the whole Design or Design Element.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

Signed: .....……..... Firm: .....
DESIGNER (Team leader for Designer)

Name (Block Capitals): ..... Date: .....…….....

Signed:.....……..…….. Firm: .....
CONTRACTOR (Agent)

Name (Block Capitals): ..... Date: .....

2. Receipt of this Certificate is acknowledged

Signed: .....……..... Date: .....
on behalf of the ENGINEER

* Insert Description of part of Design or Design Element:

Fencing and Environmental Barriers	(F)	Electrical Installation	(I)
Drainage	(D)	Communication Systems	(C)
Road Pavements	(P)	Environmental and Landscape	(E)
Road Layout	(R)	Undertakers	(U)
Kerb, Footways and Paved Areas	(K)	Private Apparatus Owners	(O)
Signs and Road Markings	(S)	Accommodation Works	(A)
Lighting	(L)		

DESIGN CHECK CERTIFICATE: OTHER PART(S) OF THE DESIGN OR DESIGN ELEMENT
CERTIFICATE NO: DCC( )*....……

1. We hereby certify to the Employer in respect of the check of the following part of the Design or Design Element namely:

.....…….....…..(Name of Design Element)

that reasonable professional skill and care has been taken by us in carrying out the independent check of the part of the Design or Design Element with a view to securing that the part of the Design or Design Element:-

i. complies with the Employer's Requirements.

ii has been accurately translated into the construction drawings and other design documents bearing the unique numbers listed below:

iii. is not detrimental to the whole Design or Design Element.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

Signed: .....…..…….....…….... Firm: .....….....
CHECKER (Team leader for Checker)

Name (Block Capitals): ..... Date: .....…….....

Signed:.....……..... Firm: ....….....….....
CONTRACTOR (Agent)

Name (Block Capitals): ..... Date: …….....

2. Receipt of this Certificate is acknowledged

Signed: .....……..... Date:.....….....
on behalf of the ENGINEER

* Insert Description of part of Design or Design Element:

Fencing and Environmental Barriers	(F)	Electrical Installation	(I)
Drainage	(D)	Communication Systems	(C)
Road Pavements	(P)	Environmental and Landscape	(E)
Road Layout	(R)	Undertakers	(U)
Kerb, Footways and Paved Areas	(K)	Private Apparatus Owners	(O)
Signs and Road Markings	(S)	Accommodation Works	(A)
Lighting	(L)		

INTERIM CONSTRUCTION CERTIFICATE

CERTIFICATE NO: ICC .....……....

This Certificate is in respect of the period from …….....…….....to.....…….....

1. We hereby certify to the Employer that we have supervised the construction of the Works during the period to which this Certificate relates and that we have exercised reasonable professional skill and care with a view to securing that the parts of the Works set out below have been constructed in accordance with the requirements of the Design

   The parts of the Works referred to in this Certificate are:

   .....…….....

   .....…….....

   .....……

   We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

   Signed: .....…...……..... Firm: .....
   DESIGNER (Team leader for Designer)

   Name (Block Capitals): ..... Date: .....…….....

   Signed:.....….....……..... Firm: .....
   CONTRACTOR (Agent)

   Name (Block Capitals): .....…. Date: .....…….....

2 Receipt of this Certificate is acknowledged

   Signed: .....……..... Date: .....
   on behalf of the ENGINEER

FINAL CONSTRUCTION CERTIFICATE

CERTIFICATE NO: FCC.....……...

1. We hereby certify to the Employer that we have supervised with reasonable professional skill and care the construction and completion of the Design or Design Element namely:

   .....…….....(Name of Design or Design Element)

   with a view to securing that it has been constructed in accordance with the requirements of the Design.

   We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

   Signed: ....…....……..... Firm: .....….....
   DESIGNER (Team leader for Designer)

   Name (Block Capitals): ..... Date: .....…….....

   Signed:.....……..... Firm: ....….....….....
   CONTRACTOR (Agent)

   Name (Block Capitals): ..... Date: .....…….....

2. Receipt of this Certificate is acknowledged

   Signed: ..... Date: .....
   on behalf of the ENGINEER

INTERIM POST CONSTRUCTION CERTIFICATE

CERTIFICATE NO: IPCC…….....

This Certificate is in respect of the period from .....to..…….... within the Period of

Maintenance for the .....……..……..……..…..

1. We hereby certify to the Employer that we have supervised the correction of defects of the relevant parts of the Works during the period to which this Certificate relates and that we have exercised reasonable professional skill and care with a view to securing that parts of the Works set out below have been corrected to accord with the Design.

   The parts of the Works referred to in this certificate are:

   .....……..

   .....……..

   .....……..

   .....……..

   .....……..

   .....……..

   We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

   Signed: .....…….....…..... Firm: .....….....
   DESIGNER (Team leader for Designer)

   Name (Block Capitals): .....Date: .....…….....

   Signed:.....……..... Firm: .....….....….....
   CONTRACTOR (Agent)

   Name (Block Capitals): ..... Date: .....…….....

2. Receipt of this Certificate is acknowledged

   Signed: .....……..... Date: .....
   on behalf of the ENGINEER

FINAL POST CONSTRUCTION CERTIFICATE

CERTIFICATE NO: FPCC.....

1. We hereby certify to the Employer in respect of:

.....(Name of part of the Design or Design Element)

that we have supervised with reasonable professional skill and care the correction of defects of the above named parts of the Works with a view to securing that it has been corrected to accord with the requirements of the Design.

We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

Signed: ..... Firm: .....
DESIGNER (Team leader for Designer)

Name (Block Capitals): .....Date: .....

Signed:..... Firm: .....
CONTRACTOR (Agent)..

Name (Block Capitals): .....Date: .....

2. Receipt of this Certificate is acknowledged

Signed: ..... Date: .....
on behalf of the ENGINEER

CONSULTATION CERTIFICATE

CERTIFICATE NO: CNC…….....

CONSULTATION WITH .....…….....(*Name of Consultee*)

1. We hereby certify to the Employer in respect of:

   .....……...(Name of part of Design or Design Element)

   that we have consulted with .....…….....(*Name of Consultee*) and have ascertained that they have no objections to the part of Design or Design Element as described on the construction documents listed in Part 2 below.

   We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

   Signed: .....…..…… Firm: .....
   DESIGNER (Team leader for Designer)

   Name (Block Capitals): ..... Date: .....……

   Signed:.....…… Firm: .....
   CONTRACTOR (Agent).

   Name (Block Capitals): ..... Date:...…….....

2. LIST OF CONSTRUCTION DOCUMENTS

3. DECLARATION BY .....…….....(*Name of Consultee*)

   On behalf of .....…….....I confirm that:

   (i) consultations referred to above have been completed,

   (ii) (*Name of Consultee*) has no objection to the Design or Design Element as described on the Construction Documents listed in Part 2 above, and

   (iii) the Construction Documents listed in Part 2 above meet all known requirements

   Signed:
   .....…….....

   Name (Block Capitals): ..... Date: .....…….....

   (duly authorised to sign on behalf of .....…….....(*Name of Consultee)*

   Date: .....…...

   Receipt of this Certificate is acknowledged

   Signed: .....……Date: ..…….....
   on behalf of the ENGINEER

ROAD SAFETY AUDIT CERTIFICATE

CERTIFICATE NO: RSAC…….....

This Certificate refers to the Stage.....** Road Safety Audit applicable to Zone of Interest Number.....**

.....……..…….....……

.....……..…….....……

.....……..…….....……

1. We hereby certify to the Employer that all the safety issues raised in the audit report have been addressed by:

   (i)* incorporating all / some* of the recommendations of the audit report in the Design or Design Element (Reference: .....***).
   and*
   (ii)* adopting alternative solutions that have been agreed by the audit team and have been incorporated in the Design or Design Element (Reference: .....***).
   and*
   (iii)* incorporating in the Design or Design Element the decision of the arbitrator (as defined in Design Manual for Roads and Bridges) with respect to the issues detailed in the exception report (Reference .....***).

   We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

   Signed: .....…… Firm: .....
   DESIGNER (Team leader for Designer)

   Name (Block Capitals): ..... Date: .....…….....

   Signed:.....…….. Firm: .....
   CONTRACTOR (Agent)

   Name (Block Capitals): .....… Date: .....…….....

2. Receipt of this Certificate is acknowledged

   Signed: .....……..... Date: .....
   on behalf of the ENGINEER

   * Delete as appropriate
   ** Insert appropriate references
   *** Insert report and/or associated correspondence references and report item numbers

STAGE 2 ROAD SAFETY AUDIT CERTIFICATE FOR TEMPORARY TRAFFIC MANAGEMENT SCHEMES.

CERTIFICATE NO: RSAC(TTM2)……

This Certificate refers to the Stage 2 Road Safety Audit of the Temporary Traffic Management Schemes* referred to on Drawing Number(s)**

.....……..……

.....……..……

.....……..……

1. We hereby certify to the Employer that all the safety issues raised in the audit report have been addressed by:

   (i)* incorporating all / some* of the recommendations of the audit report in the Design or Design Element (Reference: .....***).
   and*
   (ii)* adopting alternative solutions that have been agreed by the audit team and have been incorporated in the Design or Design Element (Reference: .....***).
   and*
   (iii)* incorporating in the Design or Design Element the decision of the arbitrator (as defined in Design Manual for Roads and Bridges) with respect to the issues detailed in the exception report (Reference .....***).

   We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

   Signed: ..... Firm: ……
   DESIGNER (Team leader for Designer)

   Name (Block Capitals): .....…Date: .....……

   Signed:..... Firm:.....
   CONTRACTOR (Agent)

   Name (Block Capitals): .....…Date: .....……

2. Receipt of this Certificate is acknowledged

   Signed: .....Date: .....
   on behalf of the ENGINEER

   * Delete as appropriate
   ** Insert appropriate references
   *** Insert report and/or associated correspondence references and report item numbers

STAGE 3 ROAD SAFETY AUDIT CERTIFICATE FOR TEMPORARY TRAFFIC MANAGEMENT SCHEMES.

CERTIFICATE NO: RSAC(TTM3)……..

This Certificate refers to the Stage. 3 Road Safety Audit of the Temporary Traffic Management Schemes referred to on Drawing Number(s)**

.....

.....

.....

1. We hereby certify to the Employer that all the recommendations of the audit have been incorporated in the Design or Design Element (Reference .....***).

   We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

   Signed: .....Firm: .....
   DESIGNER (Team leader for Designer)

   Name (Block Capitals): .....Date: .....

   Signed:..... Firm: .....
   CONTRACTOR (Agent)

   Name (Block Capitals): ..... Date: .....

2. Receipt of this Certificate is acknowledged

   Signed: ..... Date: .....
   on behalf of the ENGINEER

   ** Insert appropriate references
   *** Insert report and/or associated correspondence references and report item numbers

TEMPORARY WORKS CERTIFICATE

CERTIFICATE NO: TWC……

1. We hereby certify to the Employer that the preparation of the design of Temporary Works comprising

   (Description of Temporary Works)

   has been carried out with reasonable professional skill and care with a view to securing that:

   i) it has been designed in accordance with the following standards:

   ii) The design has been successfully translated into Temporary Works Drawings bearing the unique numbers:

   We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor

   Signed: …… Firm: ……
   CONTRACTOR (Agent)

   Name (Block Capitals): ..... Date: .....……

2. We have carried out an independent check of the Contractors proposals with reasonable professional skill and care with a view to securing that they are satisfactory for the proper discharge of his responsibilities under the Contract for the safety of the said parts of the Works and without detriment to the Works.

   Signed: …….. Firm: ……..
   TEMPORARY WORKS CHECKER
   (Director or Partner)

   Name (Block Capitals): ..... Date: .....……

3. Receipt of this Certificate is acknowledged

   Signed:…….. Date: ……..…
   On behalf of the ENGINEER

PROVENANCE CERTIFICATE

CERTIFICATE NO: PC……..…

1. We hereby certify that the provenance/origin of the United Kingdom native plant stock incorporated in the Works are as identified in the Plant Schedule contained in Annex 1 of this certificate.

   We agree that the words and phrases herein, unless otherwise stated, have the same meaning as attributed to them in the Contract between the Employer and Contractor.

   Signed:* ……..…… Firm: ……...……..…….
   DESIGNER (Team leader for Designer)

   Name (Block Capitals): ..... Date: .....…….....

   Signed:.....…….....……..Firm: .....….....…….....
   CONTRACTOR (Agent)

   Name (Block Capitals): ..... Date: .....…….....

2. Receipt of this Certificate is acknowledged

   Signed: .....……...……..…….....Date: .....…….....….....
   on behalf of the ENGINEER

   *Delete as appropriate

ANNEX 1 TO PROVENANCE CERTIFICATE **CERTIFICATE NO:- PC…….**

BOTANICAL NAME	QUANTITY	FORM/AGE	HEIGHT (cm)	ZONE OF PROVENANCE AND LOCATION	APPROXIMATE DATE PROPAGATION MATERIAL COLLECTED	NURSERY OR NURSERIES AT WHICH THE PLANTS HAVE BEEN GROWN
……..…	……	……	……...	……	……	……
……..	……	……	……...	……	……	……
……	……	……	……...	……	……	……
……	……	……	……	……	……	……
……	……	……	……	……	……	……
……	……	……	……	……	……	……
……	……	……	……	……	……	……
……	……	……	……	……	……	……
……	……	……	……	……	……	……

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APPENDIX D

THIS IS APPENDIX D TO THE EMPLOYER'S REQUIREMENTS

DEPARTURES FROM STANDARDS PROFORMAS

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Application for Departure from Standards

Design Manual for Roads and Bridges Volumes 1, 2 and 3 (Structures) Proforma

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DEPARTURE FROM STANDARDS
(Bridges and other Highway Structures)

Name of Project _____
Name of Bridge or Structure _____
Structure Reference Number _____

TRANSPORT SCOTLAND

APPLICATION FOR DEPARTURE FROM STANDARDS Design Manual for Roads and Bridges VOLUMES 1 TO 3 (STRUCTURES)

APPLICANT:

PROJECT TITLE:

DEPARTURE No:

STRUCTURE REF:

SUBMISSION DATE:

1. List of Supporting Documentation:

Standards:

Drawings:

Other:

2. Description of Proposed Departure:
(Include details of Design Manual for Roads and Bridges Standards and Clause numbers which are being departed from)

3. Designer/Assessor Justification:
(Include reasons why existing Design Manual for Roads and Bridges Standards are inappropriate)

4. Cost Implications:
(Include an estimate of cost savings to Transport Scotland as well as the effect on future maintenance costs)

4.1 Construction Costs

4.2 Maintenance Costs

5. Applicant Design Team Leader Declaration:

I declare that reasonable professional skill and care have been exercised in the preparation of this Departure submission.

Signed:

Name:

Date:

6. Transport Scotland Bridges Branch Comments and Recommendation:

Signed:

Name:

Date:

DEPARTURE FROM STANDARDS
(Bridges and other Highway Structures)

Name of Project _____
Name of Bridge or Structure _____
Structure Reference Number _____

7. Transport Scotland Chief Bridges Engineer Recommendation:

The above Departure is Approved/Rejected

Signed:

Name:

Date:

Application for Departure from Standards

Design Manual for Roads and Bridges Volume 6 (Road Geometry) Proforma

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APPLICANT : .....

PROJECT TITLE : .....

DEPARTURE NO. : .....

PROJECT DETAILS	
General description of project	
Route Strategy	
Road Category & Type	
Proposed Carriageway Cross Section	
Design Speed Proposed	
Future Traffic Flows & Composition	

DESCRIPTION OF DEPARTURE	
Location and Chainage	
Departure Type	
Design Manual for Roads and Bridges Reference	
Required Standard	
Standard Provided	
Associated Departures or Relaxations	
Drawing Nos.	

APPLICANT : .....

PROJECT TITLE :

DEPARTURE NO. :

JUSTIFICATION	
Detailed Justification	
Safety Implications	
Structural Integrity	

ESSENTIAL COMPENSATORY MEASURES	
Compensatory Measures	

APPENDIX E

THIS IS APPENDIX E TO THE EMPLOYER'S REQUIREMENTS

UNDERTAKERS' NOTICES

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APPENDIX E - UNDERTAKERS' NOTICES

Date	Utility Company	NRSWA Appendix Reference	Notes
[REDACTED]			

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APPENDIX F

THIS IS APPENDIX F TO THE EMPLOYER'S REQUIREMENTS

LOCAL COUNCIL DESIGN STANDARDS AND GUIDELINES
(included in the Information Pack)

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APPENDIX F

LOCAL COUNCIL DESIGN STANDARDS AND GUIDELINES

HIGHLAND COUNCIL ROADS AND TRANSPORT GUIDELINES FOR NEW DEVELOPMENTS (MAY 2013)

and

TRANSPORT SCOTLAND'S ROADS FOR ALL – GOOD PRACTICE GUIDE FOR ROADS (JULY 2013)

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APPENDIX G

THIS IS APPENDIX G TO THE EMPLOYER'S REQUIREMENTS

DESIGN LOADING FOR VARIABLE MESSAGE SIGNS

[NOT USED]

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APPENDIX H

THIS IS APPENDIX H TO THE EMPLOYER'S REQUIREMENTS

STRUCTURES DESIGN BASIS

[NOT USED]

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APPENDIX I

THIS IS APPENDIX I TO THE EMPLOYER'S REQUIREMENTS

CONSULTATION MATRIX

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ER Part 2 Section	Description	Current Consultee(s)
1.7	Temporary Traffic Management Schemes	Transport Scotland Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] BEAR Scotland Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED] Police Scotland Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED]
3.1.1	Permanent Fencing and Accommodation Works Fencing	Transport Scotland Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED]
3.2.1	Water Environment Approvals	Scottish Environment Protection Agency (SEPA) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED]
3.2.1	Compliance with Planning Regulations	Highland Council Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED]

ER Part 2 Section	Description	Current Consultee(s)
3.2.1	Works Discharging to Berriedale/Langwell Water	Caithness District Salmon Fishery Board Contact Person: [REDACTED] Email: [REDACTED] Telephone Number: [REDACTED] Scottish Natural Heritage (SNH) Contact: [REDACTED] Email: [REDACTED] Telephone number: [REDACTED] Address: [REDACTED]
3.2.2	Working Hours and Control of Noise and Vibration	Highland Council Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED]
3.4.1	Maintenance of Existing Public Roads within the Site	BEAR Scotland Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED]
3.6.1	Provision of Accommodation Works	Relevant Landowners
3.7.1	Alterations to Public and Private Roads, Accesses and Public/Private Rights of Way	John O' Groats Walking Trail (JOGT) Contact person: [REDACTED] Email: [REDACTED] Telephone Number: [REDACTED]
3.8.1	Site Security	Police Scotland Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED]

ER Part 2 Section	Description	Current Consultee(s)
4.2.1.11	Provision for Non-Motorised Users	Transport Scotland Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] John O' Groats Walking Trail (JOGT) Contact person: [REDACTED] Email: [REDACTED] Telephone Number: [REDACTED]
4.2.2.1	Site Clearance (Trunk Roads)	Transport Scotland Trunk Road and Bus Operations (TRBO) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED]
4.2.3.3	Permanent Fencing	Transport Scotland Major Transport Infrastructure Projects (MTRIPS) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED]
4.2.4.1	Anti-glare Screens	Transport Scotland Trunk Road and Bus Operations (TRBO) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED]
4.2.4.2	Road Restraint Systems	Transport Scotland Transport Scotland Trunk Roads: Network Management Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED]

ER Part 2 Section	Description	Current Consultee(s)
4.2.5.1	Drainage Design	Scottish Environment Protection Agency (SEPA) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED] Caithness District Salmon Fishery Board Contact Person: [REDACTED] Email: [REDACTED] Telephone Number: [REDACTED]
4.2.5.2	Connection to Drainage Network (Trunk Roads)	Transport Scotland Trunk Road and Bus Operations (TRBO) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED]

ER Part 2 Section	Description	Current Consultee(s)
4.2.5.4	Discharge of Water	Scottish Environment Protection Agency (SEPA) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED] Scottish Water Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED] Caithness District Salmon Fishery Board Contact Person: [REDACTED] Email: [REDACTED] Telephone Number: [REDACTED] BEAR Scotland Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED]
4.2.5.6	Watercourse Diversions	Scottish Environment Protection Agency (SEPA) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED]

ER Part 2 Section	Description	Current Consultee(s)
4.2.5.9	Flood Prevention and Pollution Control	Scottish Environment Protection Agency (SEPA) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED] Caithness District Salmon Fishery Board Contact Person: [REDACTED] Email: [REDACTED] Telephone Number: [REDACTED]
4.2.5.10	Maintenance Access Routes	Transport Scotland Trunk Roads and Bus Operations (TRBO) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED]

ER Part 2 Section	Description	Current Consultee(s)
4.2.6.1	Blasting	The Highland Council Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED] BEAR Scotland Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED] Scottish Natural Heritage Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED] Scottish Environment Protection Agency (SEPA) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED]
4.2.7.5	Surface Course Specification TS2010	Transport Scotland Trunk Roads and Bus Operations (TRBO) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED]
4.2.8.1	NMU Facilities (Trunk Roads)	Transport Scotland Trunk Roads and Bus Operations (TRBO) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED]

ER Part 2 Section	Description	Current Consultee(s)
4.2.9.1	Signs, Road Markings etc. (Trunk Roads)	Transport Scotland Trunk Roads and Bus Operations (TRBO) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED]
4.2.9.4	Maintaining Existing Signing	Transport Scotland Trunk Roads and Bus Operations (TRBO) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] BEAR Scotland Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED]
4.2.9.5	Chart Nodes	Transport Scotland Trunk Roads and Bus Operations (TRBO) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED]
4.3.1.2	Structures Adjacent to Watercourses	Scottish Environment Protection Agency (SEPA) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED] SNH Contact: [REDACTED] Email: [REDACTED] Telephone number: [REDACTED] Address: [REDACTED]

ER Part 2 Section	Description	Current Consultee(s)
4.3.1.3	Layout and Location of Apparatus	BT Openreach Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED] Scottish Water Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED] Scottish and Southern Energy (SSE) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED]
4.3.1.3 cont.	Layout and Location of Apparatus	Vodafone Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED]
4.4.3.1	Appointment of the Landscape Clerk of Works	Transport Scotland Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED]
4.4.3.2	Appointment of the Archaeologist	Transport Scotland Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED]

ER Part 2 Section	Description	Current Consultee(s)
4.4.3.3	Appointment of the Ecological Clerk of Works	Scottish Natural Heritage (SNH) Contact: [REDACTED] Email: [REDACTED] Telephone number: [REDACTED] Address: [REDACTED]
4.4.4.1	Air Quality / Reduction of Dust	Highland Council Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED]
4.4.4.2	Re-use of Materials	Scottish Environment Protection Agency (SEPA) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED]
4.4.4.3	Water Quality & Drainage	Scottish Environment Protection Agency (SEPA) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED] Caithness District Salmon Fishery Board Contact Person: [REDACTED] Email: [REDACTED] Telephone Number: [REDACTED]

ER Part 2 Section	Description	Current Consultee(s)
4.4.4.3	Monitoring Water Quality	Scottish Environment Protection Agency (SEPA) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED] Caithness District Salmon Fishery Board Contact Person: [REDACTED] Email: [REDACTED] Telephone Number: [REDACTED]
4.4.4.4	Planning Policies and Consents	Highland Council Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED]
4.4.4.5	Protected Species & Sites	Scottish Natural Heritage (SNH) Contact: [REDACTED] Email: [REDACTED] Telephone number: [REDACTED] Address: [REDACTED] Caithness District Salmon Fishery Board Contact Person: [REDACTED] Email: [REDACTED] Telephone Number: [REDACTED]

ER Part 2 Section	Description	Current Consultee(s)
4.4.4.7	Cultural Heritage	Transport Scotland Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Highland Council Environmental Advice & Consultancy Archaeologist Contact Person: [REDACTED] Email: [REDACTED] Telephone number: [REDACTED] Historic Environment Scotland [REDACTED]
4.4.4.23	Construction Noise Nuisance	Highland Council Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED]
4.4.5.6	Landscape Design Approvals	Transport Scotland Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Transport Scotland Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED]
4.4.8.4	Planting Design Approvals	Transport Scotland Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED]

ER Part 2 Section	Description	Current Consultee(s)
4.7.4	Contaminated Land	Scottish Environment Protection Agency (SEPA) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED] Highland Council Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED]
4.8.1.1	Traffic Scotland	Transport Scotland Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED]
5.1.1	Location of Apparatus and Diversion Works	BT Openreach Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED] Scottish Water Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED] Scottish and Southern Energy (SSE) Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED]

ER Part 2 Section	Description	Current Consultee(s)
5.1.1 cont.	Location of Apparatus and Diversion Works	Vodafone Contact: [REDACTED] Email: [REDACTED] Tel: [REDACTED] Address: [REDACTED]
6.3.1.1	Compliance Surveys	Transport Scotland Trunk Roads and Bus Operations (TRBO) Contact: [REDACTED] Email: [REDACTED] Telephone number: [REDACTED]
7.5.1	Inventory Requirements	Transport Scotland Asset Management Branch of Trunk Roads and Bus Operations (TRBO) Contact: [REDACTED] Email: [REDACTED] Telephone number: [REDACTED]

Notes:

1. SEPA – Scottish Environment Protection Agency.
2. SNH – Scottish Natural Heritage
3. The Contractor shall note the division of responsibilities with respect to consultations, shown in the table overleaf.

Division of Responsibilities	
SNH	**Local Authority (LA)**
Designated sites (Natura and SSSIs)	**Nature conservation and biodiversity interests that are not internationally or nationally designated (including Ancient Woodland)**
Deer	**Protected species advice**
Landscape – national (NSAs) and other significant landscape impacts	**Landscape – non designated**
Outdoor Access – national issues	**Outdoor Access – local issues**
Protected species advice (as per our service level statement – i.e. We provide advice only if requested by LA and a recent survey/mitigation plan shows that protected species are present on the site, but the LA is uncertain that the proposed mitigation is sufficient to avoid an offence.) Note SNH has a statutory role in relation to species licensing.	

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APPENDIX J

THIS IS APPENDIX J TO THE EMPLOYER'S REQUIREMENTS

REINFORCED SOIL DIMENSIONAL TOLERANCES AND DEFORMATION LIMITS

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APPENDIX K

THIS IS APPENDIX K TO THE EMPLOYER'S REQUIREMENTS

STAGE 1 ROAD SAFETY AUDIT REPORT

(To be provided by Tenderer with Tender Submission)

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APPENDIX L

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WALKING, CYCLING AND HORSE-RIDING REVIEW

(To be provided by Tenderer with Tender Submission)

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APPENDIX M

THIS IS APPENDIX M TO THE EMPLOYER'S REQUIREMENTS

AMENDMENTS TO THE DESIGN MANUAL FOR ROADS AND BRIDGES AND THE MANUAL OF CONTRACT DOCUMENTS FOR HIGHWAY WORKS

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APPENDIX M

AMENDMENTS TO THE DESIGN MANUAL FOR ROADS AND BRIDGES AND THE MANUAL OF CONTRACT DOCUMENTS FOR HIGHWAY WORKS

SEDD/SE/TS INTERIM AMENDMENTS

SEDD INTERIM AMENDMENT No 11	Manual of Contract Documents for Highway Works (MCHW); The Housing Grants, Construction and Regeneration Act 1996
SEDD INTERIM AMENDMENT No 12	Manual of Contract Documents for Highway Works (MCHW); Volume 1: Appendix A: Sector Scheme 14 (for the Production of Asphalt Mixes)
SEDD INTERIM AMENDMENT No 13	Manual of Contract Documents for Highway Works (MCHW); Supply of Goods and Services by Local Authorities
SEDD INTERIM AMENDMENT No 14	Manual of Contract Documents for Highway Works (MCHW); Aggregates Levy
SEETLLD INTERIM AMENDMENT No 16	Manual of Contract Documents for Highway Works (MCHW); Sustainability in Construction - the Considerate Constructors Scheme
SE INTERIM AMENDMENT No 18	Manual of Contract Documents for Highway Works (MCHW); the Use of the Saturation Ageing Tensile Stiffness (SATS) Test
TS INTERIM AMENDMENT No 20	Interim Management Strategy for Concrete Half-Joint Deck Structures
TS INTERIM AMENDMENT No 21	Principal and general inspection of sign / signal gantries, and gantries with low handrails or open mesh flooring (BD 63/94 and BA63/94)
TS INTERIM AMENDMENT No 22	Implementation of New Reinforcement Standards (BS 4449:2005, BS 4482:2005, BS 4483: 2005 and BS 8666:2005)
TS INTERIM AMENDMENT No 23	Implementation of BS8500-1:2006 Concrete – Complementary British Standard to BS EN 206-1
TS INTERIM AMENDMENT No 24	Guidance on implementing results of research on bridge deck waterproofing
TS INTERIM AMENDMENT No 25	Assessment and Upgrading of Existing Vehicle Parapets
TS INTERIM AMENDMENT No 26	The Anchorage of Reinforcement and Fixings in Hardened Concrete
TS INTERIM AMENDMENT No 27	Implementation of Construction (Design and Management) 2007 and the withdrawal of SD 10/05 and SD 11/05

TS INTERIM AMENDMENT No 28	Certification of Combined Kerb and Drainage Products
TS INTERIM AMENDMENT No 29	Identification of 'Particularly at Risk' Supports
TS INTERIM AMENDMENT No 30	The Use of Foamed Concrete
TS INTERIM AMENDMENT No 32	Clarification on the deflection of permanent formwork during the construction of trunk road bridges
TS INTERIM AMENDMENT No 33	Guidance on the use of various documents relating to General & Principal Inspections for Trunk Road Structures
TS INTERIM AMENDMENT No 34	Guidance on the use of High Friction Surfacing at Signalised Pedestrian Crossings on single carriageway Trunk Roads
TS INTERIM AMENDMENT No 35/15	Guidance on the Introduction of Transport Scotland TS 2010 surface course specification
TS INTERIM AMENDMENT No 36	Guidance on structural safety reporting relating to the Scottish Trunk Road Network
TS INTERIM AMENDMENT No 37	Design of Single 2+1 single roads
TS INTERIM AMENDMENT No 38	Temporary Barrier Decision Tool (TBDT)
TS INTERIM AMENDMENT No 39	Use of Eurocodes for the Design of Bridges and Road Related Structures
TS INTERIM AMENDMENT No 42	Temporary Cover Plates Over Bridge Expansion Joints
TS INTERIM AMENDMENT No 43	Strategy for the Repair/Replacement of Joints
TS INTERIM AMENDMENT No 44	Simplified Design Method for the Crack, Seat and Overlay Method - Notes for Guidance
TS INTERIM AMENDMENT No 45	Management of Abnormal Loads
TS INTERIM AMENDMENT No 46/16	Structures Inspector Competencies and Certification
TS INTERIM AMENDMENT No 47/16	Adoption of IAN 154
TS INTERIM AMENDMENT No 48	Adoption of IAN 156/16R1

INTERIM ADVICE NOTES

INTERIM ADVICE NOTE 73/06 Revision 1 (2009)	Design Guidance for Road Pavement Foundations
INTERIM ADVICE NOTE 156/16R1	Revision of Aggregate Specification for Pavement Surfacing

APPENDIX N

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AS CONSTRUCTED REQUIREMENTS

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APPENDIX N

AS CONSTRUCTED REQUIREMENTS

General Requirements
The As Constructed Requirements shall be as described in Section 7 of Part 1.

Road Design Criteria
A suitable format for the recording of the Roads Design Criteria referred to in Section 7 of Part 1 is contained within this Appendix.

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AS CONSTRUCTED REQUIREMENTS
ROADS DESIGN CRITERIA

Scheme Name:
Scheme Identifier:

1. Horizontal Geometry

Transition curve design basis

Minimum radius ……..metres with percent superelevation

Minimum sight distance ……..metres

Road layout design basis

Curve Number	Length (metres)	Radius (metres)	Crossfall (percent)

2. Vertical Geometry

Road layout design basis

Curve Number	Length (metres)	K Value

3. Pavement Design

Initial traffic (commercial vehicles/day)

Designed growth rate (percent)

Designed traffic (commercial vehicles/day)

Pavement Type ……..

If alternative design, state departure

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APPENDIX O

THIS IS APPENDIX O TO THE EMPLOYER'S REQUIREMENTS

SCHEDULE OF SUPPLEMENTARY REQUIREMENTS

(To be provided by Tenderer with Tender Submission)

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APPENDIX P

THIS IS APPENDIX P TO THE EMPLOYER'S REQUIREMENTS

STRUCTURES DESIGN STATEMENT

(To be provided by Tenderer with Tender Submission)

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Name of Project: **A9 Berriedale Braes Improvement Scheme**
Name of Bridge or Structure: **Buried Piled Sub-Structure**
Structure Ref No's: **ST01**

INTRODUCTION

1 ROAD DETAILS

1.1 Type of road

1.2 Permitted traffic speed [2]

1.3 Existing restrictions [3]

2 SITE DETAILS

2.1 Obstacle crossed

3 PROPOSED STRUCTURE

3.1 Description of Structure and design working life [4]

3.2 Structural type

3.3 Foundation type (including any special measures or associated works such as ground treatment or mine workings consolidation to take account of any problems identified in Section 6 below)

3.4 Span arrangements

3.5 Articulation arrangements

3.6 Classes and levels [5D]

3.6.1 Consequence class

3.6.2 Reliability class

3.6.3 Inspection level

3.7 Road restraint systems requirements

3.8 Proposed arrangements for future maintenance and inspection / Inspection for Assessment [1]

3.8.1 Traffic management

3.8.2 Arrangements for future maintenance and inspection of structure. Access arrangements to structure.

3.8.3 Intrusive or further investigations proposed [A]

3.9 Environment and sustainability

3.10 Durability. Materials and finishes [1,6D] / Materials strengths assumed and basis of assumptions [1,6A]

.

3.11 Risks and hazards considered for design, execution, maintenance and demolition Consultation with and/or agreement from Principal Designer [7]

3.12 Proposed arrangements for execution [D]

3.12.1 Construction of Structure

3.12.2 Traffic management

3.12.3 Service diversions

3.12.4 Interface with existing Structures

3.13 Year of construction [A]

3.14 Reason for assessment [A]

3.15 Part of Structure to be assessed [A]

4 DESIGN CRITERIA

4.1 Actions

4.1.1 Permanent actions

4.1.2 Snow, wind and thermal actions

4.1.3 Actions relating to normal traffic under AW regulations and C&U regulations [8D, 8A]

4.1.4 Actions relating to General Order Traffic Under STGO regulations [9D]

4.1.5 Footway or footbridge variable actions

4.1.6 Actions relating to Special Order Traffic, provision for exceptional abnormal indivisible loads including location of vehicle track on deck cross-section [10D]

4.1.7 Accidental actions

4.1.8 Actions during execution

4.1.9 Any special actions not covered above [11]

4.2 Heavy or high load route requirements and arrangements being made to preserve the route, including any provisions for future heavier loads or future widening [12]

4.3 Minimum headroom provided

4.4 Authorities consulted and any special conditions required

4.5 Standards and documents

4.5.1 Technical Standards Schedule

See Annex A

4.5.2 Additional relevant Standards and publications

4.6 Proposed Departures from Standards given in 4.5

See Annex C

4.7 Proposed methods for dealing with aspects not covered by Standards in 4.5

4.8 List of record of options and choices (for Category 2 and 3 checks) [13D]

5 STRUCTURAL ANALYSIS

5.1 Methods of analysis proposed for superstructure, substructure and foundations [14]

5.2 Description and diagram of idealised Structure to be used for analysis

See Annex B.

5.3 Assumptions intended for calculation of structural element stiffness

5.4 Proposed range of soil parameters to be used in the design / assessment [1] of earth retaining elements [D, 15A]

6 GEOTECHNICAL CONDITIONS

6.1 Geotechnical Category of Structure (BS EN 1997-1) [D]

6.2 Acceptance of recommendations of the Geotechnical Design Report to be used in the design / assessment [1] and reasons for any proposed changes

6.3 Summary of design for highway Structure in the Geotechnical Design Report

6.4 Differential settlement to be allowed for in the design / assessment [1] of the Structure (including reference to settlements at interface between Structure and earthworks)

6.5 If the Geotechnical Design Report is not yet available, state when the results are expected and list the sources of information used to justify the preliminary choice of foundations [16]

6.6 Tolerances for reinforced soil Structures (face angle >70 degrees) (including methodology for measurement) [D]

7 CHECKING

7.1 Proposed Category [D, A] and Design Supervision Level [D]

Category 3 and Design Supervision Level DSL3.

7.2 Name of proposed Category 3 Checker

8 DRAWINGS AND DOCUMENTS

8.1 List of drawings (including numbers) and documents accompanying the submission [17]

ANNEX A - Technical Standards Schedule [18D, 18A]

ANNEX B - Diagram of idealised structural analysis model

ANNEX C - Departures from Standards

ANNEX D - Drawings

9 THE ABOVE ACCURATELY REFLECTS THE ASSUMPTIONS USED FOR DESIGN / ASSESSMENT [1] OF THIS STRUCTURE

Signed _____

Name _____
Design Team Leader

Engineering Qualifications _____ [19]

Name of Organisation _____

Date _____

Notes

D. Indicates clauses to be used in Design SDS only.

A. Indicates clauses to be used in Assessment SDS only.

1. Delete as appropriate.

2. For a bridge, give over and/or under.

3. Include weight, height, width and any environmental restrictions at or adjacent to the bridge.

4. The design working life of the structure, including temporary structure, and replaceable structural parts shall be given. They shall be expressed as a number of years rather than a range of years. A design working life shall be based on the Design Manual for Roads and Bridges if stated. Otherwise it may be based on the guidance given in the Overseeing Organisation's current requirements for the use of Eurocodes for the design of highway structures.

5D State the classes and levels for the whole structure, as well as those for the individual main structural elements if higher or lower. See the Overseeing Organisation's current requirements for the use of Eurocodes for the design of highway structures. Refer to BS EN 1990:2002 + A1:2005 cl. B3, B4 and B5 for further information.

6D For concrete Structures, give applicable exposure classes for particular structural elements as stated in TS IA 23. For all material strengths given, list the relevant codes/standards..

6A Give material strengths from record drawings or intrusive investigation. For all material strengths given, list the relevant codes/standards.

7. List only risks and hazards that would not be apparent to an experienced and competent Contractor or are likely to require special attention to manage them effectively. Where possible and practicable, the identified potential risks and hazards shall be eliminated or minimised during the design stage. The Principal Contractor will confirm that the Principal Designer has reviewed the risks and hazards identified in this SDS and is satisfied.

8D. e.g. Load Models 1 or 2, BS EN 1991-2.

8A e.g. Assessment Loading

9D. e.g. SV model vehicle in Load Model 3, BS EN 1991-2.

9A e.g. HB or SV loading

10D e.g. SOV model vehicle in Load Model 3, BS EN 1991-2 and / or individual vehicle which includes the following information as applicable:

- *a) Gross weight of the vehicle in tonnes and vehicle type and number;*
- *b) Axle load and spacing (longitudinally and transversely);*
- *c) Air cushion in tonnes over area applied in m x m; and*
- *d) Single or twin tyres and wheel contact areas.*

11 e.g. seismic action, atmospheric icing, floating debris etc.

12. The heavy or high load route requirements should be confirmed with Transport Scotland.

13 Not used.

14 List the main structural elements for superstructure, substructure and foundation.

15A For assessment of existing Structures, where no such geotechnical information is available, suggested earth pressure coefficient values given in relevant Design Manual for Roads and Bridges parts should be used instead.

16. When the Geotechnical Design Report becomes available , an addendum to the SDS, covering section 6, must be submitted to the Employer. The addendum must have its own sections 8 and 9 to provide a list of drawings, documents and signatures.

17. Where appropriate, also include:

- *a) Relevant extracts from the Geotechnical Design Report;*
- *b) Methods of dealing with aspects not covered by Standards; and*
- *c) Relevant correspondence and documents from consultations.*

18D The relevant Design Standards are given in Annex A below to this Appendix P.

18A The relevant Assessment Standards are given in the Design Manual for Roads and Bridges (DMRB).

19. CEng, MICE, MIStructE or equivalent.

STRUCTURES DESIGN STATEMENT

ANNEX A

Technical Standards Schedule for New Works Design

It is the responsibility of the compiler of the Structures Design Statement and/or the design or check certificate compiler to ensure that the Standards, references and clauses used - including amendments and corrigenda are relevant and current at the Base Date.

Documents in italics are under preparation at the time of publication of this document.

All Standards and Documents not used shall be struck through.

Schedule of Documents Relating to
Design of Highway Bridges and Structures
using Structural Eurocodes

British Standards (non-conflicting with Structural Eurocodes)	
BS 4449:2005+A3:2016	Steel for the reinforcement of concrete
BS 8002:2015	Code of practice for earth retaining structures
BS 8004:2015	Code of practice for foundations
BS 8006-1:2010 + A1:2016	Code of practice for strengthened/reinforced soils and other fills
BS 8500-1:2015 + A1:2016	Concrete – Complementary British Standard to BS EN 206:Method of specifying and guidance for the specifier
BS EN 206:2013 + A1:2016	Concrete – Specification, performance, production and conformity
BS EN 1317-1:2010	Road restraint systems – Part 1 – Terminology and general criteria for test methods
BS EN 1317-2:2010	Road restraint systems – Part 2 – Performance classes, impact test acceptance criteria and test methods for safety barriers including vehicle parapets
BS EN 1317-3:2010	Road restraint systems – Part 3 – Performance classes, impact test acceptance criteria and test methods for crash cushions
DD ENV 1317-4: 2002	Road restraint systems – Part 4 – Performance classes, impact test acceptance criteria and test methods for terminals and transitions of safety barriers
BS EN 1317-5:2007 + A2:2012	Road restraint systems – Part 5 – Product requirements and evaluation of conformity for vehicle restraint systems
PD CEN/TR 16949:2016	Road Restraint System – Pedestrian restraint system - Pedestrian parapets
Draft prEN 1317-7	Road restraint systems - Part 7: Performance classes, impact test acceptance criteria and test methods for terminals of safety barriers
PD CEN/TS 1317-8:2012	Road restraint systems - Part 8: Motorcycle road restraint systems which reduce the impact severity of motorcyclist collisions with safety barriers
BS EN 10080:2005	Steel for the reinforcement of concrete – Weldable reinforcing steel - General
BS EN 14388:2015	Road traffic noise reducing devices - Specifications
BS EN 15050:2007 + A1:2012	Precast concrete products. Bridge elements

Structural Eurocodes	
BS EN 1990:2002 + A1:2005	Eurocode: Basis of structural design
NA to BS EN 1990:2002 + A1:2005	UK National Annex to Eurocode: Basis of structural design
BS EN 1991-1-1:2002	Eurocode 1: Actions on structures. Part 1-1: 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. Part 1-1: General Actions. Densities, self-weight, imposed load for buildings
BS EN 1991-1-3:2003 + A1:2015	Eurocode 1: Actions on structures - Part 1-3: General Actions: Snow loads
NA to BS EN 1991-1-3:2003 + A1:2015	UK National Annex to Eurocode 1: Actions on structures. Part 1-3: General Actions. Snow loads
BS EN 1991-1-4:2005 + A1:2010	Eurocode 1: Actions on structures – Part 1-4: General Actions: Wind actions
NA to BS EN 1991-1-4:2005 + A1:2010	UK National Annex to Eurocode 1: Actions on structures. Part 1-4: General Actions. Wind actions
BS EN 1991-1-5:2003	Eurocode 1: Actions on structures – Part 1-5: General Actions: Thermal actions
NA to BS EN 1991-1-5:2003	UK National Annex to Eurocode 1: Actions on structures. Part 1-5: General Actions. Thermal actions
BS EN 1991-1-6:2005	Eurocode 1: Actions on structures – Part 1-6: General Actions: Actions during execution
NA to BS EN 1991-1-6:2005	UK National Annex to Eurocode 1: Actions on structures. Part 1-6: General Actions. Actions during execution
BS EN 1991-1-7:2006 + A1:2014	Eurocode 1: Actions on structures – Part 1-7: General Actions: Accidental actions
NA to BS EN 1991-1-7:2006 + A1:2014	UK National Annex to Eurocode 1: Actions on structures. Part 1-7: General Actions. Accidental actions
BS EN 1991-2:2003	Eurocode 1: Actions on structures – Part 2: Traffic loads on bridges
NA to BS EN 1991-2:2003	UK National Annex to Eurocode 1: Actions on structures. Part 2: Traffic loads on bridges
BS EN 1992-1-1:2004 + A1:2014	Eurocode 2: Design of concrete structures – Part 1-1: General rules and rules for buildings
NA 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
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

Structural Eurocodes	
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 structures – Part 3: Liquid retaining and containment structures
BS EN 1993-1-1:2005 + A1:2014	Eurocode 3: Design of steel structures – Part 1-1: General rules and rules for buildings
NA to BS EN 1993-1-1:2005 + A1:2014	UK National Annex to Eurocode 3: Design of steel structure – 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: General rules – Supplementary rules for cold-formed members and sheeting
BS EN 1993-1-4:2006 + A1:2015	Eurocode 3: Design of steel structures – Part 1-4: General rules – Supplementary rules for stainless steels
NA to BS EN 1993-1-4:2006 + A1:2015	UK National Annex to Eurocode 3: Design of steel structures – Part 1-4: General rules – 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 + A1:2016	UK National Annex to Eurocode 3: Design of steel structure – 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 structure – 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

Structural Eurocodes	
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 + A1:2012	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 1993-5:2007 + A1:2012	UK National Annex to Eurocode 3: Design of steel structures – Part 5: Piling
BS EN 1994-1:2004	Eurocode 4: Design of composite steel and concrete structures – Part 1-1: General rules and rules for buildings
NA to BS EN 1994-1:2005	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 + A2:2014	Eurocode 5: Design of timber structures – Part 1-1: General – Common rules and rules for buildings
NA to BS EN 1995-1-1:2004 + A1:2008	UK 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	UK National Annex to Eurocode 5: Design of timber structures – Part 2: Bridges
BS EN 1996-1-1:2005 + A1:2012	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 + A1:2012	UK 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	UK 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

Structural Eurocodes	
NA to BS EN 1996-3:2006 + A1:2014	UK National Annex to Eurocode 6: Design of masonry structures – Part 3: Simplified calculation methods for unreinforced masonry structures
BS EN 1997-1:2004 + A1:2013	Eurocode 7: Geotechnical design – Part 1: General rules
NA to BS EN 1997-1:2004 + A1:2013	UK 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 1998-1:2004 + A1:2013	Eurocode 8: Design of structures for earthquake resistance – Part 1: General rules, seismic actions and rules for buildings
NA to BS EN 1998-1:2004	Eurocode 8: Design of structures for earthquake resistance – Part 1: General rules, seismic actions and rules for buildings
BS EN 1998-2:2005 + A2:2011	Eurocode 8: Design of structures for earthquake resistance – Part 2: Bridges
NA to BS EN 1998-2:2005	UK 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	UK National Annex to Eurocode 8: Design of structures for earthquake resistance - Part 5: Foundations, retaining structures and geotechnical aspects
BS EN 1999-1-1:2007 + A2:2013	Eurocode 9: Design of aluminium structures– Part 1-1: General structural rules
NA to BS EN 1999-1-1:2007 + A1:2009	UK National Annex to Eurocode 9: Design of aluminium structures – Part 1-1: General structural rules
BS EN 1999-1-3:2007 + A1:2011	Eurocode 9: Design of aluminium structures – Part 1-3: Structures susceptible to fatigue
NA to BS EN 1999-1-3:2007 + A1:2011	UK National Annex to Eurocode 9: Design of aluminium structures – Part 1-3: Structures susceptible to fatigue
BS EN 1999-1-4:2007 + A1:2011	Eurocode 9: Design of aluminium structures – Part 1-4 Cold formed structural sheeting
NA to BS EN 1999-1-4:2007	UK National Annex to Eurocode 9: Design of aluminium structures – Part 1-4: Cold formed structural sheeting

BSI Published Documents (To be used with Structural Eurocodes))	
PD 6704	Guidance on the design of structures to the UK National Annex to *BS EN 1990*
PD 6688-1-1:2011	Background paper to the UK National Annex to BS EN 1991-1-1
PD 6688-1-4: 2015	Background information to the National Annex to BS EN 1991-1-4 and additional guidance
PD 6688-1-5	Background paper to the UK National Annex to BS EN 1991-1-5
PD 6688-1-7: 2009 + A1:2014	Recommendations for the design of structures to BS EN 1991-1-7
PD 6688-2:2011	Background to the National Annex to BS EN 1991-2
PD 6687-1:2010	Background paper to the 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 + A1:2012	Recommendation for the design of bridges to BS EN 1993
PD 6695-5	Background paper to the UK National Annex to BS EN 1993-5
PD 6705-2:2010 + A1:2013	Recommendations for the execution of steel bridges to BS EN 1090-2
PD 6696-2:2007 + A1:2012	Background paper to BS EN 1994-2 and the UK National Annex to BS EN 1994-2
PD 6697 2010	Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2
PD 6694-1:2011	Recommendations for the design of structures subject to traffic loading to BS EN 1997-1
PD 6698: 2009	Recommendations for the design of structures for earthquake resistance to BS EN 1998
PD 6702-1:2009	Recommendations for the design of aluminium structures to BS EN 1999
PD 6705-3:2009	Recommendations for the execution of aluminium structures to BS EN 1090-3
PD 6703: 2009	Structural Bearings - Guidance on the use of structural bearings

Execution Standards	
BS EN 1090-1:2009 + A1:2011	Execution of steel structures and aluminium structures – Part 1: Requirements for conformity assessment of structural components
BS EN 1090-2: 2008 + A1:2011	Execution of steel structures and aluminium structures – Part 2: Technical requirements for the execution of steel structures
BS EN 1090-3:2008	Execution of steel structures and aluminium structures – Part 3: Technical requirements for aluminium structures
BS EN 13670:2009	Execution of concrete structures

The Manual of Contract Documents for Highway Works (MCDHW)
Volume 1: Specification for Highway Works
Volume 2: Notes for Guidance on the Specification for Highway Works
Volume 3: Highway Construction Details

Design Manual for Roads and Bridges (Design Manual for Roads and Bridges) **General Requirements, Standards (GD Series)**	
GD 01	Introduction to the Design Manual for Roads and Bridges
GD 02	Quality Management Systems for Highway Design

Design Manual for Roads and Bridges (Design Manual for Roads and Bridges) **Bridges and Structures, Advice Notes (BA Series)**	
BA 26/94	Expansion Joints for use in Highway Bridge Decks
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 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

Bridges and Structures, Standards (BD Series)	
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
BD 35/14	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 Markings of Highway Structures
BD 47/99	Waterproofing and Surfacing of Concrete Bridge Decks
BD 51/14	Portal and Cantilever Signs / Signal Gantries
BD 62/07	As-built, Operational and Maintenance Records for Highway Structures
BD 65/14	Design Criteria for Collision Protection Beams
BD 67/96	Enclosure of Bridges
BD 78/99	Design of Road Tunnels
BD 82/00	Design of Rigid Buried Pipes
BD 90/05	Design of FRP Bridges and Highway Structures
BD 91/04	Unreinforced Masonry Arch Bridges
BD 94/17	Design of Minor Structures
BD 100/16	The Use of Eurocodes for the Design of Highway Structures

Traffic Engineering and Control, Standards and Advice Notes (TD and TA Series)	
TD 9/93	Highway Link Design
TD 19/06	Requirement for Road Restraint Systems
TD 27/05	Cross Sections and Headroom
TD 36/93	Subways for Pedestrians and Cyclists, Layout and Dimensions
TD 89/08	Use of Passively Safe Signposts, Lighting Columns & Traffic Signal Posts to BS EN 12767

Highways, Advice Notes (HA Series)

HA 66/95	Environmental Barriers – Technical Requirements
HA 107/04	Design of Outfall and Culvert Details

Highways, Standards (HD Series)	
HD 22/08	Managing Geotechnical Risk
HD 45/09	Road Drainage and the Water Environment

Transport Scotland Interim Amendments	
TS IA 22	Transport Scotland Interim Amendment No 22: Implementation of New Reinforcement Standards (BS 4449:2005, BS 4482:2005, BS 4483: 2005 and BS 8666:2005)
TS IA 23 Revision 3	Transport Scotland Interim Amendment No 23: Implementation of BS 8500-1:2006 Concrete – Complimentary British Standard to BS EN 206-1
TS IA 24	Transport Scotland Interim Amendment No 24: Guidance on implementing results on research on bridge deck waterproofing
TS IA 25	Transport Scotland Interim Amendment No 25: Assessment and upgrading of existing vehicle parapets
TS IA 26	Transport Scotland Interim Amendment No 26: The Anchorage of Reinforcement & Fixings in Hardened Concrete
TS IA 30	Transport Scotland Interim Amendment No 30: The Use of Foamed Concrete
TS IA 32	Transport Scotland Interim Amendment No 32: The Deflection of Permanent Formwork during the Construction of Trunk Road Bridges
TS IA 39 (Annex C only)	Use of Eurocodes for the Design of Bridges and Road Related Structures
TS IA 42	Transport Scotland Interim Amendment No 42: Temporary Cover Plates Over Bridge Expansion Joints
TS IA 43	Transport Scotland Interim Amendment No 43: Strategy for the Repair/Replacement of Joints
TS IA 45	Transport Scotland Interim Amendment No 45: Management of Abnormal Loads 28 3 14
TS IA 46	Transport Scotland Interim Amendment No 46: Structures Inspector Competencies and Certification

Miscellaneous	
CIRIA C543	Bridge Detailing Guide

CIRIA C660	Early-age Thermal Crack Control in Concrete
CIRIA C686	Safe Access for Maintenance and Repair
CIRIA C742	Manual on scour at bridges and other hydraulic structures
CIRIA C760	Guidance on embedded retaining wall design
CIRIA C764	Hidden defects in bridges. Guidance for detection and maintenance.

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STRUCTURES DESIGN STATEMENT

ANNEX B

Diagram of idealised structural analysis model

[REDACTED]

STRUCTURES DESIGN STATEMENT

ANNEX C

Departures from Standard

[REDACTED]

STRUCTURES DESIGN STATEMENT

ANNEX D

Drawings

[REDACTED]

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APPENDIX Q

THIS IS APPENDIX Q TO THE EMPLOYER'S REQUIREMENTS

ENVIRONMENTAL ASSESSMENT DOCUMENTS
(included in the Information Pack)

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LIST OF ENVIRONMENTAL ASSESSMENT DOCUMENTS

1. Record of Determination, April 2014
2. A9 Berriedale Braes Improvement Scheme, Non-Statutory DMRB Stage 3 Environmental Report, November 2014
3. A9 Berriedale Braes Improvement Scheme, Habitat Regulations Appraisal Screening Report, July 2014
4. A9 Berriedale Braes, 2017 GI Ecology Survey, November 2017
5. A9 Berriedale Braes Improvement, 2018 Ecology Surveys Update, August 2018
6. A9 Berriedale Braes Improvement, Modelling of Construction Noise and Vibration on Nesting Seabirds in East Caithness Special Protection Area - Report to Support Habitats Regulations Appraisal, July 2018
7. A9 Berriedale Braes Improvement, Statement to Inform Appropriate Assessment, August 2018
8. A9 Berriedale Braes Improvement - Licence Application Form – Otters, August 2018
9. A9 Berriedale Braes Improvement - Otter Protection Plan, August 2018

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APPENDIX R

THIS IS APPENDIX R TO THE EMPLOYER'S REQUIREMENTS

DETAILS OF ADDITIONAL LAND REQUIRED BY THE CONTRACTOR FOR THE WORKS

(To be provided by the Tenderer with Tender Submission)

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APPENDIX S

THIS IS APPENDIX S TO THE EMPLOYER'S REQUIREMENTS

STATUTORY ORDERS AND SCHEME SCHEDULES
(included in the Information Pack)

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APPENDIX S

STATUTORY ORDERS AND SCHEME SCHEDULES

The Statutory Orders relevant to the Contract are:

Title	Drawing No
The A9 Trunk Road (Berriedale) Compulsory Purchase Order 2017	M9/A9 TRUNK ROAD (BERRIEDALE BRAES IMPROVEMENT) COMPULSORY PURCHASE ORDER 2017 – CPO/01
The M9/A9 Trunk Road (Berriedale Braes Improvement)(Trunking) Order 2017	M9/A9 TRUNK ROAD (BERRIEDALE BRAES IMPROVEMENT) (TRUNKING) ORDER 2017 – ROAD ORDER TR01
The M9/A9 Trunk Road (Berriedale Braes Improvement)(Side Roads) Order 2017	M9/A9 TRUNK ROAD (BERRIEDALE BRAES IMPROVEMENT) (SIDE ROADS) ORDER 2017 – SIDE ROADS ORDER SR01
A9 Berriedale Braes - Watercourse Notice - WC01 - Final as Published – signed	The M9/A9 Trunk Road (Berriedale Braes Improvement) Notice of Works in Relation to Waters – Plan No. WC 01

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APPENDIX T

THIS IS APPENDIX T TO THE EMPLOYER'S REQUIREMENTS

DEFECT REPORTING

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APPENDIX T

DEFECT REPORTING

Defect Reporting
The Employer proposes to have a maintenance handover meeting two months prior to the issuing of the Completion Certificate.

A suitable format for defect reporting during the Maintenance Period is contained within this Appendix

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A9 BERRIEDALE BRAES IMPROVEMENT SCHEME

DEFECT REPORT NO. ……. DATE……...

PART A

1. Location of defect ……..
2. Link…….Section……CH/X-Sec ……
3. Description of Location ……..
4. Date of inspection by **ROADS AUTHORITY** ……
5. Description of defect……
   ……..……....
6. Immediate action taken **Permanent Repair** **Temporary Repair** **Report Only**
7. Date permanent repair to be completed……
8. Report attached YES NO
9. Brief description of repair required……..……
   ……..
10. Is occupation of the carriageway required to effect repairs? YES NO
11. Defect repair to be carried out by [*CONTRACTOR]* **ROADS AUTHORITY** by the date specified at 7 above
    NB: Where *[CONTRACTOR]* requires to occupy the carriageway to carry out repairs then arrangements to programme the occupation shall be made with **ROADS AUTHORITY**.

PART B

12. Is the defect third party damage? YES NO
13. Is the defect due to the Contractor's liability? YES NO

The EMPLOYER considers that the cost of carrying out these necessary repairs should be met by:-

THIRD PARTY *[CONTRACTOR]* **ROADS AUTHORITY**

Signed for **EMPLOYER**……Date……....

PART C

14. Permanent Repair of the defect was carried out by:-
    [*CONTRACTOR]* **ROADS AUTHORITY**
    on……(Date)
    Signed for *[CONTRACTOR]*/**ROADS AUTHORITY** …… Date……

PART D

EMPLOYER confirms the cost of carrying out permanent repair should be met by:-
THIRD PARTY *[CONTRACTOR]* **ROADS AUTHORITY**

Signed for **EMPLOYER**……Date……....

CONTACT DETAILS

[CONTRACTOR]
FAX
EMAIL
[ROADS AUTHORITY]
FAX
EMAIL
[TRUNK ROAD MANAGEMENT AND MAINTENANCE CONTRACTOR]
FAX
EMAIL

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APPENDIX U

THIS IS APPENDIX U TO THE EMPLOYER'S REQUIREMENTS

TRAFFIC VOLUMES

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APPENDIX U

TRAFFIC VOLUMES

Traffic Flows

Predicted traffic flows are shown for years 2021 and 2031, based on currently available modelling and survey data.

Location	AADF 2-Way Flow (TMfS:07 Growth)		% HGV
	2021	2031	
New A9 Trunk Road	2,275	2,564	12%

Notes:-

1. AADF represents Annual Average Daily Traffic Flow
2. % HGV includes the daily commercial vehicles figure and contains OGV1, OGV2 and PSV figures.
3. Notwithstanding the above data reference shall be made to Section 4.2.7 of Part 1 for the msa values to be used in the road pavement Design.

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APPENDIX V

THIS IS APPENDIX V TO THE EMPLOYER'S REQUIREMENTS

PROPERTIES AND STRUCTURES REQUIRING CONDITION SURVEYS

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APPENDIX V

PROPERTIES AND STRUCTURES REQUIRING CONDITION SURVEYS

The following properties require Property Schedule of Condition Surveys:

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APPENDIX W

THIS IS APPENDIX W TO THE EMPLOYER'S REQUIREMENTS

PROCEDURE FOR STRUCTURES ASSESSMENT

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APPENDIX W

PROCEDURE FOR STRUCTURES ASSESSMENT

(Note: This procedure shall only be used with structures with a minimum Assessed Live Load (ALL) capacity of 40 tonnes and minimum HB capacity in accordance with BD37/01: Section 4.1. The Employer does not warrant the accuracy of any assessment reports. Structures with an assessed live load capacity below 40 tonnes, and/or HB capacity below the BD37/01 requirements, will require to be demolished/strengthened at the Contractor's expense.)

W1 The assessment of an existing Structure with a minimum ALL capacity of 40 tonnes and HB capacity in compliance with BD 37/01, which is to be widened or otherwise modified, shall be carried out in accordance with the flowchart below and the following procedure:

(a) analyse the existing Structure to determine the load effects (moments, shears etc) the loading being in accordance with current assessment standards;

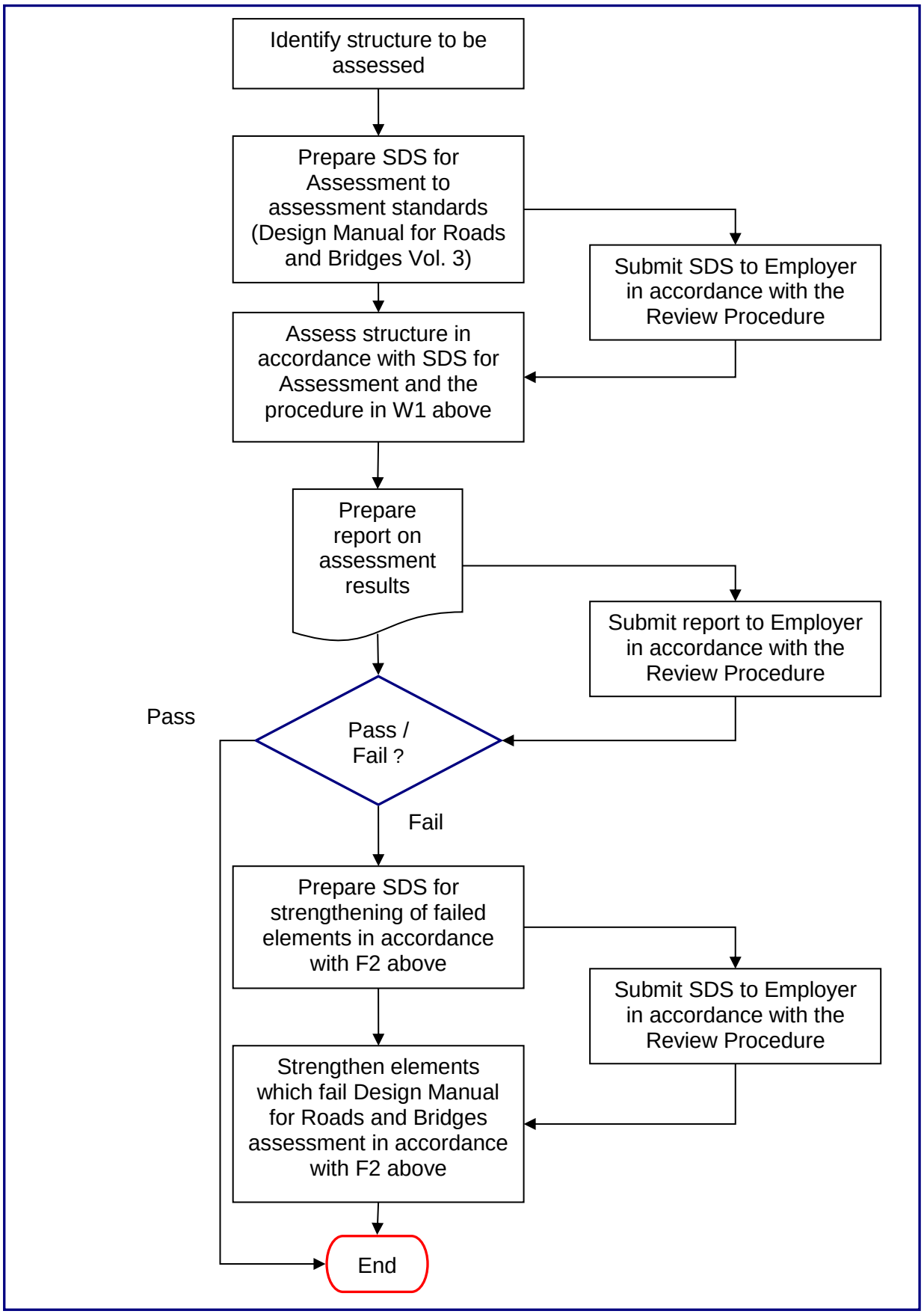
(b) analyse the Structure to determine the load effects (moments, shears etc) following widening or modification, the loading on the whole Structure being in accordance with current assessment standards;

(c) analyse the Structure to determine the load effects (moments, shears etc) following widening or modification, the loading on the whole Structure being in accordance with current Eurocode design standards.

(d) in relation to that part of the existing Structure to be retained and incorporated in the modified / widened Structure, provided the load effects determined in (b) above are no more adverse than those determined in (a) above, no strengthening need be carried out on the part of the existing Structure to be retained; and

(e) in relation to that part of the existing Structure to be retained and incorporated in the modified / widened Structure, where the load effects determined in (b) above are more adverse than those determined in (a) above, the part of the existing Structure to be retained and in which the load effects have become more adverse due to the proposed widening / modification shall be strengthened to carry the load effects determined in (c) above. Those parts of the existing Structure in which the load effects have not increased need not be strengthened;

W2 All new works to existing Structures which are to be widened or otherwise modified shall be designed to accommodate the load effects determined in accordance with current Eurocode design standards.



Flowchart for the assessment/strengthening of existing structure

APPENDIX X

THIS IS APPENDIX X TO THE EMPLOYER'S REQUIREMENTS

LIST OF WATERCOURSE DIVERSIONS

[NOT USED]

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APPENDIX Y

THIS IS APPENDIX Y TO THE EMPLOYER'S REQUIREMENTS

ROCK ENGINEERING GUIDES TO GOOD PRACTICE: ROAD ROCK SLOPE EXCAVATION (PUBLISHED PROJECT REPORT PPR556, JUNE 2000) (included in the Information Pack)

AND

ROCK ENGINEERING GUIDES TO GOOD PRACTICE: ROAD ROCK SLOPE REMEDIAL AND MAINTENANCE WORKS (PUBLISHED PROJECT REPORT PPR555, JUNE 2000) (included in the Information Pack)

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APPENDIX Z

THIS IS APPENDIX Z TO THE EMPLOYER'S REQUIREMENTS

EARTHWORKS DESIGN STATEMENT

(To be provided by the Tenderer with Tender Submission)

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APPENDIX Z
EARTHWORKS DESIGN STATEMENT

Name of Project	**A9 Berriedale Braes Improvement Scheme**
Name of Earthworks	
Earthworks Ref. No.	
Location / Chainage	

1 ROAD DETAILS

1.1 Type of Road

1.2 Permitted traffic speed

1.3 Nature of Scheme / Scheme Element *(e.g. new highway construction, highway widening, earthworks maintenance)*

2 EARTHWORKS TYPE AND PURPOSE

2.1 Generic Type of Earthworks *(e.g. earth embankment, rock cutting, strengthened soil slope, soil nailing)*

2.2 Purpose *(e.g. to allow highway widening, for earthworks failure reinstatement, for new construction in area of restricted land take, etc.)*

3 OUTLINE OF EXISTING GROUND AND GROUNDWATER CONDITIONS

(this section to refer to and summarise the relevant sections of the Designer's Ground Investigation Report and make use of drawings and sections as appropriate)

3.1 Ground Investigation Data *(list report references and comment on extent of data)*

3.2 Existing Ground Conditions *(brief summary of natural soil sequence, Made Ground, etc., together with strata levels)*

3.3 Existing Groundwater Conditions *(note on groundwater levels and movements)*

3.4 **Soil and Groundwater Chemistry** *(note on sulfate / chloride / pH conditions and / or ground contamination and microbiological action)*

3.5 **Existing Geotechnical Problems and Risks** *(any factors of geotechnical significance related to the existing ground conditions, e.g. slope failures, solution features, mine workings, slopes with marginal factors of safety, very soft / highly compressible soils, etc.)*

(The use of referenced drawings and sections to provide detail is encouraged)

4 PROPOSED EARTHWORKS

4.1 **Description of Earthwork** *(range of and average height of proposed earthwork in its final form, i.e. slope face angle, facing / landscaping details including where appropriate topsoil and planting details)*

4.2 **Foundation Preparation, including any Measures to deal with Geotechnical Problems** *(foundation proposals for the earthwork, including any special measures, field trails or associated works such as ground improvement or mine workings consolidation to take account of any problems outlined in 3.5 above)*

4.3 **Materials to be used in Construction** *(outline description of any geosynthetics, soil nails, imported fill materials, etc., including Design Certificates and evidence of CE marking under the Construction Products Directive where appropriate*)

4.4 **Drainage Measures** *(particular drainage control measures to be incorporated)*

4.5 **Arrangements for Highway Furniture and Buried Services and Landscaping** *(relevant details)*

4.6 **Inspection and Maintenance** *(particular inspection and maintenance requirements [including where appropriate the maintenance of vegetated slope faces], over and above routine observations)*

4.7 **Interface with Structures** *(brief details of interface construction measures with bridges, abutments, retaining walls, buried structures, other Earthworks, etc.)*

4.8 **Instrumentation and Monitoring** *(particular instrumentation and monitoring required to inform / confirm design, to monitor / control construction and to monitor / confirm post-construction performance, over and above routine observations)*

5 DESIGN METHODS

This section to refer to summaries and / or append supporting outputs from the design methods adopted as appropriate.)

5.1 **Internal Stability** *(the referenced design method / approach for determining stability of the earthwork itself)*

5.2 **External / Global Stability** *(the referenced design method / approach for determining stability of any associated overall slopes which include the strengthened earthwork)*

5.3 **Settlement** *(the referenced design method / approach for determining settlement of the earthwork including any long-term post construction settlement)*

6 DESIGN / ASSESSMENT CRITERIA

(this section to refer to and summarise the relevant sections of the Geotechnical Design Report and, where appropriate, the construction movement tolerances for reinforced soil structures carrying superimposed structures agreed with the Employer)

6.1 **Geotechnical Category of Earthworks (BS EN 1997-1) and Design Life**

6.2 **List of Relevant Documents**

6.3 **Limit State Design Criteria** *(partial factors and / or target factor of safety on limit state stability conditions to be applied in the design, on both stability of the earthwork itself and on overall stability of associated slopes)*

6.4 **Serviceability Design Criteria** *(any total / differential settlement or other movement criteria adopted by the Designer, including any imposed by the New Works Requirements)*

6.5 **Design Parameters for Soils and Materials** *(schedule of relevant main design parameters for the soils and other materials to be used in construction compromising Characteristic Values and their derivation; Partial Factors; Design Values; and design strata levels)*

6.6 **Design Groundwater Conditions** *(statement of worst case, or range of piezometric conditions and / or ru values to be used in the design)*

6.7 **Actions / Loadings** *(for relevant Limit States, and including confirmation of worst case live loadings to be assumed in design)*

6.8 **Description / Diagram of Idealised Soil Structure Model to be used in Analysis** *(provide a section of the earthwork to illustrate the design method and associated main design assumptions)*

6.9 **Precautions against Chemical Attack to Materials** *(measures to accommodate ground conditions set out in 3.4)*

6.10 **Proposed Departures from Design Standards** *(departures from documents listed in 6.2)*

7 CHECKING

7.1 **Name of Checker**

8 DRAWINGS AND DOCUMENTS

8.1 **List of drawings (including numbers) and documents accompanying the submission**

APPENDIX A - Soils Information *(A list of the relevant trial hole logs and test results from the soils reports listed in para 3.1 and from any additional site investigation, extract from Geotechnical Reports)*

APPENDIX B - Relevant Correspondence, Documents and Certificates from Consultation with Relevant Authorities

APPENDIX C - Drawings and documents

9 THE ABOVE ACCURATELY REFLECTS THE DESIGN ASSUMPTIONS USED FOR DESIGN OF THESE EARTHWORKS

Signed _____

Name _____
Designer (Team Leader for the Designer)

Engineering Qualifications _____

Name of Organisation _____

Date

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APPENDIX AA

THIS IS APPENDIX AA TO THE EMPLOYER'S REQUIREMENTS

STRENGTHENED EARTHWORKS APPRAISAL FORM (SEAF)

(To be provided by the Tenderer with Tender Submission)

The SEAF shall be in accordance with Appendix E of DMRB Volume 4, Section 1, HD22/08 Managing Geotechnical Risk.

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APPENDIX AA
STRENGTHENED EARTHWORKS APPRAISAL FORM (SEAF)

Name of Project	**A9 Berriedale Braes Improvement Scheme**
Name of Strengthened Earthworks	
Earthworks Ref. No.	
Location / Chainage	

1 ROAD DETAILS

1.1 Type of Road

1.2 Permitted traffic speed

1.3 Nature of Scheme / Scheme Element *(e.g. new highway construction, highway widening, earthworks maintenance)*

2 STRENGTHENED EARTHWORKS TYPE, PURPOSE AND LOCATION

2.1 Generic Type of Strengthened Earthworks *(e.g. strengthened soil slope, gabions, strengthened soil, soil nailing, crib wall)*

2.2 Purpose of Strengthened Earthwork *(e.g. to allow highway widening, for earthworks failure reinstatement, for new construction in area of restricted land take, etc.)*

2.3 Intended Location(s) for Use *(a schedule of proposed lengths of strengthened earthworks and locations)*

3 OUTLINE OF EXISTING GROUND AND GROUNDWATER CONDITIONS

(this section to refer to the relevant sections of the Geotechnical Design Report when available)

3.1 Ground Investigation Data *(list report references and comment on extent of data)*

3.2 Existing Ground Conditions *(brief summary of natural soil sequence, presence of Made Ground etc)*

3.3 **Existing Groundwater Conditions** *(note on groundwater levels*)

3.4 **Soil and Groundwater Chemistry** *(note on sulfate/chloride/pH conditions and/or ground contamination and microbiological action)*

3.5 **Existing Geotechnical Problems and Risks** *(any factors of geotechnical significance related to the existing ground conditions, e.g. slope failures, solution features, mineworkings, slopes with marginal factors of safety, very soft/highly compressible soils etc.)*

4 PROPOSED STRENGTHENED EARTHWORK

4.1 **Description of Strengthened Earthwork** *(range of and average height of proposed strengthened earthwork in its final form, ie slope face angle, facing/landscaping details including where appropriate topsoil and planting details)*

4.2 **Foundation Preparation, including any Measures to deal with Geotechnical Problems** *foundation proposals for the strengthened earthwork, including any special measures or associated works to take account of any problems outlined in 3.5 above)*

4.3 **Materials to be used in Construction** *(outline description of geosynthetics, soil nails, gabion baskets, imported fill materials etc., including Design Certificates and evidence of CE marking under the Construction Products Directive where appropriate)*

4.4 **Drainage Measures** *(particular drainage control measures to be incorporated)*

4.5 **Arrangements for Highway Furniture and Buried Services and Landscaping** *(relevant details)*

4.6 **Inspection and Maintenance** *particular inspection and maintenance requirements [including where appropriate the maintenance of vegetated slope faces], over and above routine observations)*

4.7 **Interface with Structures** *(brief details of interface construction measures with bridges, abutments, retaining walls, buried structures, other Strengthened Earthworks etc.)*

5 DESIGN METHODS

5.1 **Internal Stability** *(the referenced design method/approach for determining stability of the strengthened earthwork itself)*

5.2 **External / Global Stability** *(the referenced design method/approach for determining stability of any associated overall slopes which include the strengthened earthwork)*

6 DESIGN / ASSESSMENT CRITERIA

6.1 **List of Relevant Documents**

6.2 **Limit State Design Criteria** *(factors of safety on limit state stability conditions to be applied in the design, on both stability of the strengthened earthwork itself and on overall stability of associated slopes)*

6.3 **Serviceability Design Criteria** *(any total/differential settlement or other movement criteria adopted by the designer, including any imposed by Employer's Requirements)*

6.4 **Design Parameters for Soils and Materials** *(schedule of relevant main design parameters for the soils and other materials to be used in construction)*

6.5 **Design Groundwater Conditions** *(statement of worst case, or range of piezometric conditions and/or ru values to be used in design)*

6.6 **Live Loadings** *(confirmation of worst case live loadings to be assumed in design)*

6.7 **Description / Diagram of Idealised Soil Structure Model to be used in Analysis** *provide a section of the strengthened earthwork to illustrate the design method and associated main design assumptions)*

6.8 **Precautions against Chemical Attack to Materials** *(measures to accommodate ground conditions set out in 3.4)*

6.9 **Proposed Departures from Design Standards** *(departures from documents listed in 6.1)*

7 CHECKING

(Designer to indicate the independent checking procedures to be employed)

8 DRAWINGS AND DOCUMENTS

8.1 List of drawings and documents accompanying submission

APPENDIX A - Soils Information (A list of the relevant trial hole logs and test results from the soils reports listed in para 3.1 and from any additional site investigation, extract from Geotechnical Report including the relevant parts of section 8 of the Geotechnical Report)

APPENDIX B Relevant Correspondence, Documents and Certificates from Consultation with Relevant Authorities.

APPENDIX C - Drawings and documents.

9 THE ABOVE DESIGN AND CONSTRUTION PROPOSALS ARE SUBMITTED FOR REVIEW

Signed: .....

Geotechnical Team Leader, Design Team

Name: .....

Engineering Qualifications: .....

Date: .....

On Behalf of …….....

Geotechnical Certificate Ref No.

*Signed: .....

*Contractor (Agent or Contracts Director)

*Name: .....…..

*Date: .....……

*on behalf of .....……

10 THE ABOVE SEAF IS:

i: received*

ii: received with comments as follows*

iii: return marked “comments” as follows*

* delete as appropriate.

Signed: .....

Overseeing Organisation’s Geotechnical Advisor

Name: .....

Date: .....

(Overseeing Organisation’s Geotechnical Advisor to confirm Geotechnical Certificate Reference no (where appropriate) and comments appended to that Certificate)

Note:

'RECEIVED' = SUBMISSION ACCOMPANYING CERTIFICATE IS ACCEPTED.

'RECEIVED WITH COMMENTS' = SUBMISSION ACCOMPANYING CERTIFICATE GENERALLY

ACCEPTABLE BUT REQUIRE MINOR AMENDMENT WHICH CAN BE ADDRESSED INSUBSEQUENT REVISIONS.

'RETURNED MARKED COMMENTS' = SUBMISSION ACCOMPANYING CERTIFICATE UNACCEPTABLE AND SHOULD BE REVISED AND RESUBMITTED.

APPENDIX AB

THIS IS APPENDIX AB TO THE EMPLOYER'S REQUIREMENTS

OUTLINE EMPLOYER'S COMMUNICATION PROTOCOL

(Included in the Information Pack)

APPENDIX AC

THIS IS APPENDIX AC TO THE EMPLOYER'S REQUIREMENTS

EMPLOYER'S INFORMATION REQUIREMENTS

(Included in the Information Pack)