

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

**VOLUME 3 OF 5**

**EMPLOYER'S REQUIREMENTS**

**PART 2 – SCHEME SPECIFIC 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

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**TRANSPORT SCOTLAND**

**COMPETITION FOR**

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

**TS/MTRIPS/WKS/2017/06**

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**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. GENERAL REQUIREMENTS

### 1.1 Introduction

1.1.1 This document, Part 2 to these Employer's Requirements, has been compiled to provide the Scheme Specific Requirements for the A9: BERRIEDALE BRAES IMPROVEMENT SCHEME. It should be read in conjunction with the General Requirements outlined in Part 1 to these Employer's Requirements and the Appendices to these Employer's Requirements outlined in Part 3.

### 1.2 Design

1.2.1 Refer to Part 1 – General Requirements.

### 1.3 Construction

1.3.1 Refer to Part 1 – General Requirements.

### 1.4 General Requirements

1.4.1 Refer to Part 1 – General Requirements.

### 1.5 Provision of Records and Information

1.5.1 Refer to Part 1 – General Requirements.

### 1.6 Disruption During Construction

1.6.1 Refer to Part 1 – General Requirements.

1.6.2 Pedestrian access to The Haven and Shore Cottages via the track at approximate chainage 20 on the right hand side must be maintained throughout the duration of the Works.

1.6.3 Arrangements must be made to divert the John O'Groats walking trail throughout the duration of the Works.

### 1.7 Temporary Traffic Management Schemes

1.7.1 The relevant roads authorities for the Design, construction, completion and maintenance of the Works are:

(i) BEAR Scotland Limited, Network Manager

Contact person: [REDACTED]

Email: [REDACTED]

Telephone Number: [REDACTED]; and

(ii) Transport Scotland, Trunk Roads and Bus Operations

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

in connection with the trunk road network.

1.7.2 Consultation with Police Scotland shall be through:

(i) Contact Person: [REDACTED]

Email: [REDACTED]

Telephone Number: [REDACTED]

## 1.8 Further Requirements

1.8.1 Refer to Part 1 – General Requirements.

## 1.9 Sustainability

1.9.1 Contact details in connection with the Transport Scotland Carbon Management System (“CMS”) are:

(i) Transport Scotland, Environment Branch

Contact Person: [REDACTED]

Email: [REDACTED]

Telephone Number: [REDACTED]

## 1.10 Communications

1.10.1 General

Community Liaison Officer

1.10.1.1 The Contractor shall appoint a Community Liaison Officer (“CLO”), who shall be the primary contact point for the Employer in relation to the Contractor’s communications and community liaison responsibilities.

1.10.1.2 The CLO function may be performed by an appropriately experienced member of the Contractors site team. This role shall be effective from the Date for Commencement of the Works until the end of the Period of Maintenance.

1.10.1.3 The CLO shall be responsible for ensuring that the Employer is alerted as soon as practicable to any matter (including any direct or indirect communication received), which may have an impact upon the reputation of the Works, the Contractor, or the Employer.

1.10.1.4 If this level of resource is insufficient to deal with the number of enquiries in the required timescale then it is incumbent upon the Contractor to introduce additional personnel to assist until the response time is consistently being met.

1.10.1.5 The Contractor shall be required to submit curriculum vitae of the proposed CLO and any other personnel acting in support of this role to meet the requirements of Clause 1.10.1.4 to the Employer for approval.

1.10.1.6 The CLO shall be expected to have business cards.

Communication Implementation Plan

1.10.1.7 The Communication Implementation Plan shall detail how the Contractor shall meet the communications requirements of the Contract including but not limited to Part 1 section 1.10 and Part 2 section 1.10 of the Employer’s Requirements and the Employer’s Communications Protocol.

1.10.1.8 The Contractor shall be required to provide the Employer with a Communications Implementation Plan within 4 weeks of notification of award of contract.

1.10.2 Communications Meetings

1.10.2.1 At least 5 days in advance of any communications meeting, the Contractor shall submit in electronic format (Microsoft Word or compatible) to the Employer the following information containing sufficient detail and notice to allow quarterly forward planning of proactive and reactive communications activities:

(i) milestones for the Works construction programme (updated as appropriate);

- (ii) a three month forward projection of anticipated sustained traffic management proposals;
- (iii) a three month forward projection of any construction works or any construction related activities that are likely to cause disruption to the public; and
- (iv) a monthly summary report of enquiries, correspondence, complaints and responses as detailed in the contacts log defined in Section 1.10.5.6 of Part 1, particularly identifying any significant trends or issues that require further discussion or handling.

### **1.10.3 General Communications Requirements**

#### **Newsletter**

1.10.3.1 The final newsletter content and layout shall be provided to the Employer for approval. The standard anticipated layout is as follows:

- (i) A4 size;
- (ii) a minimum of 2 pages in length;
- (iii) full colour image; and
- (iv) in word format.

The standard layout may be subject to change based on the volume and nature of the works and will be agreed with the Employer prior to publication.

1.10.3.2 The number of copies to be printed shall be subject to the approval of the Employer (maximum 1,000 copies in total per newsletter).

1.10.3.3 The newsletter shall be produced and procured quarterly.

### **1.10.4 Publicity Sign Boards**

1.10.4.1 The Contractor shall provide 3 publicity sign boards.

### **1.10.5 Meetings, Events and Site Visits**

1.10.5.1 At the request of the Employer, the Contractor shall be asked to facilitate a minimum of 2 media events to the Site for Ministers and other dignitaries. The Contractor shall also facilitate other visits to the Site for stakeholders, community groups, media representatives, industry representatives and the like. The Contractor shall provide and maintain all necessary safety clothing and equipment to allow these visitors to access the site in compliance with site rules.

1.10.5.2 The Contractor shall facilitate all meetings, site visits and events with a dedicated Site Visit and Presentation Room within the Contractor's main site compound. The Contractor shall provide high quality information boards for use in the room, which shall feature information about the project and shall remain in the room when not in use.

1.10.5.3 The CLO shall be responsible for liaising with the Employer in relation to the arrangement and booking of visits, the provision of suitable catering for each visit, updating wall displays and other presentation materials and undertaking presentations on the progress of the Works. Catering shall be provided by the Contractor which shall consist of tea, coffee, biscuits and the like, and where requested by the Employer, a light lunch buffet.

1.10.5.4 The Contractor shall assist the Employer issuing the draft invitation/notification list for as outlined in Pt 1 section 1.10.4.1 a minimum of 14 days prior to the proposed meeting date.

- 1.10.5.5 The Contractor shall supply to the Employer for agreement formal minutes of all discussions and actions arising from attended meetings or briefings , within 48 hours of the relevant meeting. The Contractor shall issue a copy of the agreed minutes to the Employer for review 7 days prior to the next communication meeting.
- 1.10.5.6 The Employer may require the Contractor to provide and facilitate two public drop-in events at a time and venue to be agreed as stated. The Contractor shall organise the venue for the drop-in events which shall include an exhibition area for up to 25 people and a separate break-out area for staff and meetings with individual members of the public and / or stakeholders, if required. The Contractor shall also:
- (i) provide a minimum of 5 high quality A1 information boards, including relevant information relating to the proposed Works. These shall include but not be limited to activities likely to impact on landowners and the general public, including traffic management proposals and timescales;
  - (ii) provide personnel to attend the event, including the CLO and 3 other members of the Contractor's organisation with suitable knowledge of the Works;
  - (iii) develop a printed summary leaflet of the exhibition panels so members of the public can take these away. Sufficient quantities should be printed so attendees can take extra copies for neighbours and other members of the community unable to attend;
  - (iv) provide a feedback form for the public to complete at the event or return by a later specified date; and
  - (v) successfully promote the drop-in event, starting at least two weeks in advance. Tactics must include printed posters distributed to key community locations, advertising in local press and other necessary tactics to make the community aware the event's happening.

#### **1.10.6 Education Programme**

1.10.6.1 The Contractor shall be required to provide an education programme by providing a minimum of 4 man days support per annum to events organised by the Contractor or Employer in local schools.

1.10.6.2 Contractor support may include but not be limited to:

- (i) Careers presentations or advice;
- (ii) Technical talks including safety talks;
- (iii) Site visits.

The Contractor shall be required to seek prior approval from the Employer for any education related activities he chooses to undertake.

## **2. DESCRIPTION OF THE DESIGN AND THE WORKS**

### **2.1 General Scheme Details**

The full scope of the Design, construction, completion and maintenance of the Works and the obligations of the Contractor, including the Contractor's obligations to remedy any defects in the Works, shall be ascertained by reference to the Contract.

### 3. SITE INFORMATION

#### 3.1 Land Made Available by the Employer for the Works

3.1.1 Contact details in connection with the location of the permanent fencing and Accommodation Works fencing for:

- (i) the Land Made Available by the Employer for the Works; and, if relevant;
- (ii) additional land as described in Section 3.1.2. of Part 1 of these Employer's Requirements are:

(i) Transport Scotland, Major Transport Infrastructure Projects

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

#### 3.2 Permissions and the Like

3.2.1 The Contractor shall consult and comply with the requirements of:

- (i) Scottish Environment Protection Agency (SEPA)

Contact person: [REDACTED]

Email: [REDACTED]

Telephone Number: [REDACTED]

in connection with complying with the requirements of the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (“**CAR**”) and The Water Environment (Miscellaneous) (Scotland) Regulations 2017, and with respect to obtaining the necessary Permissions and the like to enable the Design, construction, completion and maintenance of the Works; and

- (ii) Highland Council

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

in connection with compliance with the requirements of planning regulations and the like with respect to obtaining the necessary Permissions and the like to enable the Design, construction, completion and maintenance of the Works.

- (iii) Caithness District Salmon Fishery Board

Contact Person: [REDACTED]

Email: [REDACTED]

Telephone Number: [REDACTED]

and:

Scottish Natural Heritage

Contact Person: [REDACTED]

Email: [REDACTED]

Telephone Number: [REDACTED]

in connection with any works affecting or discharging to Berriedale Water or Langwell Water and with respect to obtaining input to enable the Design, construction, completion and maintenance of the Works;

**3.2.2** Subject to the other requirements of the Contract, the normal working hours within the Site shall be in accordance with Appendix 1/9 of the Specification. Contact details in connection with working hours and the control of noise and vibration are:

(i) Highland Council

Contact person: [REDACTED]

Email: [REDACTED]

Telephone Number: [REDACTED]

### **3.3 Access to the Site**

**3.3.1** Refer to Part 1 – General Requirements.

### **3.4 Maintenance of Existing Public Roads within the Site**

**3.4.1** The authorities responsible for all routine, cyclic and winter maintenance of existing public roads within the Site, together with undertaking emergency response procedures and actions are:

(i) BEAR Scotland Limited, Network Manager

Contact person: [REDACTED]

Email: [REDACTED]

Telephone Number: [REDACTED]

### **3.5 Statutory Orders**

**3.5.1** Refer to Part 1 – General Requirements.

### **3.6 Accommodation Works**

**3.6.1** Refer to Part 1 – General Requirements.

### **3.7 Public and Private Roads, Accesses and Public/Private Rights of Way**

**3.7.1** Contact details in connection with alterations to public and private roads, accesses and public/private rights of way are:

(i) The relevant landowners as identified in Appendix 1/15; and

(ii) John O' Groats Walking Trail (JOGT)

Contact person: [REDACTED]

Email: [REDACTED]

Telephone Number: [REDACTED]

### **3.8 Site Security**

**3.8.1** Contact details for Police Scotland are:

(i) Contact Person: [REDACTED]

Email: [REDACTED]

Telephone Number: [REDACTED]

## 4. DESIGN CRITERIA

### 4.1 Standards

4.1.1 Refer to Section 4.1 of Part 1 – General Requirements

### 4.2 Road Design Criteria

#### 4.2.1 Road Design Standard

##### 4.2.1.1 Design Speeds

Refer to Section 4.2 of Part 1 – General Requirements.

##### 4.2.1.2 Cross Section

Refer to Section 4.2 of Part 1 – General Requirements.

##### 4.2.1.3 Horizontal Alignment

Refer to Section 4.2 of Part 1 – General Requirements.

##### 4.2.1.4 Vertical Alignment

Refer to Section 4.2 of Part 1 – General Requirements.

##### 4.2.1.5 Junctions

Refer to Section 4.2 of Part 1 – General Requirements.

##### 4.2.1.6 Closure of Existing Roads, Junctions, Lay-bys and Accesses

The Design shall ensure that:

- (i) The existing lay-by adjacent to the cemetery on the northbound carriageway shall be permanently removed; and
- (ii) The existing A9 carriageway, between reference points R1 and R2 on the Scheme Reference Drawing listed in Appendix 0/4 of the Specification, shall be permanently removed.

##### 4.2.1.7 Lay-bys

The Design shall ensure that:

- (i) The new layby identified in Appendix A of Part 3 shall be designed as a Type B layby and shall be designed in accordance with the requirements of Transport Scotland's 'Roads for All – Good Practice Guide for Roads'.

##### 4.2.1.8 Accesses

The Design shall ensure that:

- (i) The White House access identified in Appendix A of Part 3 shall be in accordance with TD 41 of the DMRB.

##### 4.2.1.9 Carriageway Tie-ins

Refer to Section 4.2 of Part 1 – General Requirements.

##### 4.2.1.10 Side Roads

Refer to Section 4.2 of Part 1 – General Requirements.

##### 4.2.1.11 Provision for Non-Motorised Users (NMU) (pedestrians, equestrians, cyclists and the like)

The Design shall ensure that:

- (i) Provision of non-motorised user routes shall be as identified in Appendix A of Part 3;

- (ii) Safe diversions are to be implemented where designated paths are disturbed, including clear signage; and
- (iii) A permanent diversion of the John O'Groats Trail shall be provided along the perimeter of the Works within the Land Made Available by the Employer for the Works. The Design of the trail is not required to be in accordance with the requirements of the DMRB nor Transport Scotland's 'Roads for All: Good Practice Guide for Roads' in relation to standards for provision for non-motorised users.

Contact details in connection with Non-Motorised User facilities are as follows:

- (i) Transport Scotland, Trunk Roads and Bus Operations
  - Contact person: [REDACTED]
  - Email: [REDACTED]
  - Telephone number: [REDACTED]
- (ii) John O' Groats Walking Trail (JOGT)
  - Contact person: [REDACTED]
  - Email: [REDACTED]
  - Telephone Number: [REDACTED]

#### 4.2.1.12 Visibility Envelopes

Target stopping sight distance for the new A9 Trunk Road identified in Appendix A of Part 3 shall be 70 metres if possible.

#### 4.2.1.13 Maintenance Crossovers

Refer to Section 4.2 of Part 1 – General Requirements.

#### 4.2.1.14 Turning Areas

Refer to Section 4.2 of Part 1 – General Requirements.

#### 4.2.1.15 Access Roads and Tracks

The Design shall ensure that:

- (i) The SUDS basin access track from the existing trunk road shall be in accordance with Transport Scotland's 'Roads for All – Good Practice Guide for Roads' and SCOTS National Roads Development Guide.
- (ii) The maximum gradient normally permitted for all access roads/tracks shall be 8% unless otherwise noted in Appendix A in Part 3. The gradient may be increased to 15% over short lengths at the discretion of the Engineer;
- (iii) The minimum gradient for drainage purposes shall be 0.5%; and
- (iv) Pedestrian access shall be maintained to The Haven and Shore Cottages via the track at approximate chainage 20m on the right hand side.

### 4.2.2 Site Clearance

#### 4.2.2.1 Contact details in connection with trunk road site clearance are:

- (i) Transport Scotland, Trunk Roads and Bus Operations
  - Contact person: [REDACTED]
  - Email: [REDACTED]
  - Telephone number: [REDACTED]

#### 4.2.2.2 Felling of Existing Trees

The design shall ensure that:

- (i) Felled timber shall be removed from the site; and
- (ii) Roots and stumps of all trees to be felled shall be fully uprooted and removed from the site.

#### 4.2.3 Fencing and Environmental Barriers

##### 4.2.3.1 Permanent Fencing, Walling, Gates and the Like

The Design shall ensure that:

- (i) Two curved masonry walls are located at the proposed viewpoint. The proposed masonry stone walls shall be constructed with locally sourced materials and methods reflective of the existing cemetery boundary walls. A stone sample should be provided to the Engineer for approval prior to the construction of the wall and a sample panel of the masonry wall should be provided for the approval of the Engineer;
- (ii) A free-standing masonry wall is located adjacent to footway at the back of the lay-by between approximate chainage 290m to 330m. The proposed masonry wall shall be constructed with locally sourced materials and methods reflective of the existing cemetery boundary walls. A stone sample should be provided to the Engineer for approval prior to the construction of the wall and a sample panel of the masonry wall should be provided for the approval of the Engineer;
- (iii) Fencing shall be provided as necessary to prevent pedestrian access from the footpath onto any steepened earthworks;
- (iv) An appropriate risk assessment shall be carried out by the Contractor to determine whether there is potential for snow drifting onto the A9 and if snow drift fencing is required, and if so an appropriate form of fence is to be designed, executed and completed. The specification and location of snow drift fencing shall be submitted for the approval of the Engineer;
- (v) Not used.
- (vi) Not used.
- (vii) Not used.

##### 4.2.3.2 Deer Fencing

Refer to Section 4.2 of Part 1 – General Requirements

##### 4.2.3.3 Permanent fencing

Contact details in connection with permanent fencing, gates and the like, to be constructed other than that identified in Appendix 1/15 of the Specification, are:

- (i) Transport Scotland: Major Transport Infrastructure Projects  
Contact person: [REDACTED]  
Email: [REDACTED]  
Telephone number: [REDACTED]

#### 4.2.4 Road Restraint Systems (Vehicular and Pedestrian)

- 4.2.4.1 Contact details in connection with the location and type of anti-glare screens between the side roads and access tracks and the new trunk roads being provided are:
- (i) Transport Scotland, Trunk Roads and Bus Operations  
Contact person: [REDACTED]  
Email: [REDACTED]  
Telephone number: [REDACTED]
- 4.2.4.2 Contact details in connection with the Design of road restraint systems are:
- (i) Transport Scotland, Trunk Roads: [REDACTED]  
Contact person: [REDACTED]  
Email: [REDACTED]  
Telephone number: [REDACTED]
- 4.2.4.3 Any road restraint systems incorporated in the Design shall have an impact severity level of A as defined in Table 3 of BS EN 1317-2.
- 4.2.4.4 Any road restraint systems incorporated in the Design shall be of steel construction, concrete road restraint systems are not considered acceptable.
- 4.2.4.5 The existing road restraint system in place at the location of the proposed SUDS basin shall be removed and replaced with a new road restraint system with sufficient setback to accommodate junction visibility.
- 4.2.4.6 Road restraint of containment classification H4b shall be provided between at least chainage 20 and chainage 140 on the right hand side of the carriageway.

#### 4.2.5 Drainage and Service Ducts

- 4.2.5.1 Contact details in connection with the drainage Design including but not limited to drainage outfalls, culverts and works on all inland watercourses are:
- (i) SEPA  
Contact person: [REDACTED]  
Email: [REDACTED]  
Telephone number: [REDACTED]
  - (ii) Caithness District Salmon Fishery Board  
Contact Person: [REDACTED]  
Email: [REDACTED]  
Telephone Number: [REDACTED]
- 4.2.5.2 Contact details in connection of drainage to the existing road drainage network are:
- (i) Transport Scotland, Trunk Road and Bus Operations  
Contact person: [REDACTED]  
Email: [REDACTED]  
Telephone number: [REDACTED]  
in relation to the existing trunk road.
- 4.2.5.3 Refer to Section 4.2 of Part 1 – General Requirements

4.2.5.4 Contact details of those interested parties identified in Section 4.2.5 of Part 1 in relation to discharging water from the Site on either a temporary or permanent basis are:

(i) Scottish Environment Protection Agency (SEPA)

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

(ii) Scottish Water

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

(iii) Caithness District Salmon Fishery Board

Contact Person: [REDACTED]

Email: [REDACTED]

Telephone Number: [REDACTED]

(iv) BEAR Scotland Ltd

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

4.2.5.5 General Drainage

The Design shall ensure that:

- (i) account shall be taken of CIRIA Report C753 "The SuDS Manual" and all surface water runoff from the new A9 Trunk Road shall pass through three levels of treatment of Sustainable Drainage Systems (SuDS) prior to out-falling into any watercourse, unless otherwise consented in writing by SEPA and the Caithness District Salmon Fishery Board;
- (ii) the drainage system shall attenuate the discharge rates to the equivalent greenfield runoff rates for each return period up to 1 in 100 year return period in accordance with HD 33. Attenuation features shall attenuate up to the 1 in 200 year return period (inclusive of 20% climate change) without flooding. Consideration shall be given to any highway flooding up to and including the 1 in 200 year return period (inclusive of 20% climate change), such that it may not adversely affect any third party land or property;
- (iii) Not used.
- (iv) Not used.
- (v) a one way flap valve shall be installed at all outfalls to ensure that the flow does not "back-up" into the pipe or drainage system;
- (vi) Not used.
- (vii) Not used.
- (viii) Not used.
- (ix) Not used.

- (x) pipes within filter drains placed in embankments with diameters greater than 500mm may only be permitted where appropriate and subject to the approval of the Engineer;
- (xi) SuDS features shall be designed in accordance with Section 4.4.4.3 of Part 2;
- (xii) Toe of embankment drainage is not required between chainage 20m and chainage 115m on the right hand side or between chainage 300m and chainage 500m on the left hand side; and
- (xiii) Vehicular access is not required to the new outfall into Berriedale Water at Reference Point WC1 as identified on the Reference Drawing listed in Appendix 0/4 of the Specification. Provision shall be made to facilitate safe access on foot to the outfall for inspection and maintenance purposes.

4.2.5.6 Contact details in connection with the Design for watercourse diversions are:

(i) SEPA

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

4.2.5.7 Culverts

Refer to Section 4.2 of Part 1 – General Requirements

4.2.5.8 Ducts

Refer to Section 4.2 of Part 1 – General Requirements

4.2.5.9 Pollution Control and Flood Prevention

The Design shall ensure that:

- (i) A hydrodynamic vortex separator, such as the Downstream Defender or other similar product approved by the Employer, shall be included in the design (unless otherwise consented in writing with SEPA and Caithness Salmon Fishery Board) to safeguard against pollution from the drainage network reaching Berriedale Water.

Contact details in connection with flood prevention and pollution control measures are:

(i) SEPA

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

(ii) Caithness District Salmon Fishery Board

Contact Person: [REDACTED]

Email: [REDACTED]

Telephone Number: [REDACTED]

4.2.5.10 Contact details in connection with measures to prevent unauthorised use of maintenance access routes are:

(i) Transport Scotland, Trunk Roads and Bus Operations

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

#### 4.2.6 Earthworks and Rock Cuttings

Refer to Section 4.4 and Part 1 – General Requirements.

##### 4.2.6.1 Blasting/Noise and Vibration

(i) All activities shall meet the requirements of the Stage 3 Environmental Assessment Report, the Modelling of Construction Noise and Vibration on Nesting Seabirds in East Caithness Special Protection Area report and the Statement to Inform Appropriate Assessment as listed in Appendix Q of Part 3 and Appendix 1/9 to the Specification.

(ii) The Contractor shall consult and comply with:

a) The Highland Council;

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

b) the Trunk Road operating company;

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

c) SNH; and

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

d) SEPA

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

as appropriate, before being permitted approval for blasting within or adjacent to their respective boundaries. The Contractor shall provide Consultation Certificates in accordance with the Certification Procedure in respect of this requirement.

(iii) A detailed blasting assessment report shall be submitted to the Employer a minimum of 21 days prior to any blasting taking place for all features within influencing distance of, as appropriate:

a) adjacent buildings and retaining walls;

b) highways structures;

c) utilities and services;

d) water tunnels and the like;

e) embankments;

f) slopes, including rock, soil and fill: and

g) any other public facilities.

- (iv) The contents of the blasting assessment report shall include, as a minimum, geology, mining, hydrology, relevant ground investigation details, layout of proposed blasting zones, overview of sensitive receivers and calculations shall be provided to show limiting vibrations (peak particle velocity and peak particle acceleration) air-overpressures and anticipated maximum charge-weights per delay allowed for all of the above listed sensitive receivers. The influencing distance of the blast shall be determined as part of the report.
- (v) Rock blasting, impact driven piling and percussive ground anchor drilling must be restricted to the period of September to February, inclusive;
- (vi) Rock blasting, impact driven piling or percussive ground anchor drilling may be permitted in August only following consultation with the consultees listed in Clause 4.2.6.1(ii) and with the approval of the Ecological Clerk of Works who must be satisfied through detailed survey that no qualifying species of the East Caithness Cliffs Special Protection Area (these being peregrine falcon, guillemot, kittiwake, razorbill, herring gull, shag puffin, great black-backed gull, cormorant and fulmar) are breeding in the area.
- (vii) Not used.
- (viii) The Contractor shall carry out trial blasts utilising their proposed blasting plan, to demonstrate the Contractor's ability to satisfy the requirements for both blasting vibration and rock cutting stability at the location of each rock cutting, and to determine relevant blasting constants and parameters for production blast design, prior to production blasts. The blasting trials shall follow the recommendations of Research Report 53 "Ground Vibration caused by Civil Engineering Works", published by the UK Transport Research Laboratory in 1986, ISBN 0266-5247. Method statements shall be produced by The Contractor detailing, but not limited to, trials to be carried out together with monitoring, testing and records to be made and requirements for inspection and logging of formations and cut faces on completion of excavation.
- (ix) A minimum of three vibrographs shall be used to record ground vibration and air overpressure, with a minimum of one vibrograph at each location of either infrastructure or property that could be affected by the blasting.
- (x) The Contractor shall use the results to ensure that production blasts do not exceed the required vibration and air overpressure limits. Method statements shall be produced detailing, but not limited to, proposals for the control of flyrock and overbreak, controlled blasting requirements and permitted stage heights.
- (xi) The blast designs and execution of the blasting works shall be undertaken using references and regulations including, but not limited to, The Quarries Regulation (1999); BS5607, 1998 Code of Practice for the Safe Use of Explosives;- Environmental Protection Act 1990; BS6472:1992; BS 7385-1:1990, BS 7385-2:1993 Scottish Executive Department Planning Advice Note 50 (PAN 50) Annex D, Part 3LR1094 (Pre-split Blasting for Highway Rock Excavation, 1983) and SR 817 (Device for measuring Drill rod and Drill Hole Orientation, 1984), published by the UK Transport Research Laboratory. The use of pre-split blasting for control,

damage to the rock mass as well as stability shall be considered, with due cognisance of the final appearance of the rock slope face.

- (xii) A post-blasting operations condition survey shall be undertaken of all features covered in the blasting assessment report and the results provided to the Employer in accordance with the Certification Procedure.
- (xiii) The Contractor shall liaise with land and property owners and occupiers, as appropriate, adjacent to the Works and take all necessary measures to minimise disturbance or intrusion to the general public and to prevent surprise or alarm being caused to the public and livestock during the execution of the Works.

Prior to any rock blasting, the Contractor shall be responsible for notifying the public of any proposed blasting activities in accordance with the following:

- a) The Contractor shall advise the public of all proposed blasting activities forming part of the Works, and shall safeguard the public against such activities.
- b) The Contractor shall issue written notification to all households, businesses, public buildings and any other occupied premises within 500 metres of the blast site of any imminent blasting activities no later than 14 days in advance of the commencement of the activities. Additionally, the Contractor shall publicise the work with an advisory notice which shall be published in the local press and shall be posted at public buildings and offices and other locations as required by the Employer no later than 14 days in advance of the activities.
- c) Where possible blasting shall be carried out at the same time or times on each date.
- d) Written notification and public notices shall include the following information as a minimum:
  - location of the proposed blasting activities;
  - precise dates and times of blasts;
  - the name and address and telephone number of a contact within the Contractor's organisation who shall deal with queries from members of the public;
  - the period over which the blasting shall be undertaken; and
  - details of audible and visual warnings to be provided prior to all individual blasts.
- (xiv) The Contractor shall remedy any defects in the Works or damage to adjacent properties or features, as defined in Clause 4.2.6.1 (iii) of this Part 2, caused by the blasting operations, as determined by the Engineer.
- (xv) Any rock crusher located remotely from the excavation location shall not be located closer to the coast than the indicative 'main area' shown on Figure 1 in the Modelling of Construction Noise and Vibration on Nesting Seabirds in East Caithness Special Protection Area report listed in Appendix Q of Part 3..

- (xvi) Any generator associated with such a 'main area' as shown on Figure 1 in the Modelling of Construction Noise and Vibration on Nesting Seabirds in East Caithness Special Protection Area report listed in Appendix Q of Part 3 shall not be located more than 50m closer to the coast than the indicative 'main area' shown on Figure 1.
  - (xvii) Any construction compound shall not be located more than 50m closer to the coast than the indicative 'main area' shown on Figure 1 in the Modelling of Construction Noise and Vibration on Nesting Seabirds in East Caithness Special Protection Area report listed in Appendix Q of Part 3.
  - (xviii) The following precautionary mitigation measures shall be employed during the bird breeding season, which is generally taken to be March to August inclusive:
    - a) Soft-start techniques shall be used when starting activities.
    - b) The loudest activities shall not be started less than one hour after sunrise nor within one hour before sunset.
    - c) Activities involving the transfer of rock material shall use the smallest drop heights possible.
    - d) Sound screening barriers shall be placed around machinery and plant that will be static for prolonged periods.
    - e) The Contractor's Ecological Clerk of Works shall oversee construction works specifically to avoid disturbance of nesting birds.
- 4.2.6.2 After pre-splitting the residual finish and appearance of the construction techniques will look to avoid obvious un-natural features (e.g. half barrels from pre-splitting) in any areas where the rock face will be exposed.
- 4.2.6.3 Lined cut-off drainage (as noted as being required in Clause 4.2.6.1 (xii) of Part 1) is not required at foot of the strengthened earthwork from chainage 65m to chainage 115m.
- 4.2.6.4 The Geotechnical Category for the Scheme is Category 2 in accordance with the classification in BS EN 1997-1:2004 + A1 2013 Eurocode 7 Geotechnical Design : Part 1 General Rules.
- 4.2.6.5 A Strengthened Earthworks Appraisal Form (SEAF), in accordance with DMRB Volume 4 Section 1 HD 22/08 Managing Geotechnical Risk, is required for all strengthened earthworks and strengthened or reinforced soil and rock cuttings (ie. soil or rock slopes stabilised with mesh, bolts and the like).
- 4.2.6.6 All strengthened earthworks and strengthened or reinforced soil and rock cuttings shall have a Design Life of 120 years.
- 4.2.6.7 All earthworks in the vicinity of the graveyard shall be constructed with a minimum clearance of 5m offset from the existing graveyard boundary wall.
- 4.2.6.8 Soil nails or other soil strengthening system, if used, shall not extend under and beyond the graveyard boundary wall.
- 4.2.6.9 Rock bolts or other rock strengthening systems, if used, shall not extend under and beyond the graveyard boundary wall.
- 4.2.6.10 Soil cutting side slopes shall be formed at no steeper than a 1v in 3h profile, with exception of the soil cutting between approximate Chainages 155m to

- 175m on the southbound carriageway where a slope formed at no steeper than 1v in 2.5h profile slope shall be permitted due to limited land.
- 4.2.6.11 Rock cutting side slopes which require to be landscaped shall be formed at no steeper than a 1v in 2h profile, with the exception of the rock cut between approximate Chainages 150m to 210m on the northbound carriageway where a steepened rock cut shall be permitted due to limited land.
- 4.2.6.12 Where rock cut slopes are steeper than 1v in 2h profile a rock trap ditch shall be provided. If there is insufficient verge width to provide a rock trap ditch the rock slope design shall include a slope stabilisation system to provide a permanent means of rock control and containment.
- 4.2.6.13 Refer to Section 4.6 for details and requirements relating to existing groundwater monitoring instrumentation at the site.
- 4.2.6.14 For the purposes of the Design, construction, completion and maintenance of ST01 buried piled substructure only, General Requirements, Clause 4.2.6.7 (iii) shall not apply, unless required to ensure stability and safety of temporary works.
- 4.2.6.15 From Chainage 420m to 513m, General Requirements, Clause 4.2.6.7 (iii) shall not apply, unless the design of the Works extends or physically modifies any such slope or part of any slope and unless required to ensure stability and safety of temporary works.

#### 4.2.7 Road Pavements

- 4.2.7.1 Refer to Section 4.2 of Part 1 – General Requirements.
- 4.2.7.2 The road pavement Design for roads as described in Appendix A in Part 3 shall be as identified in Table 4.2.7.2. The road pavement Design for all roads described in Table 4.2.7.2 shall be designed for the design life shown in accordance with the DMRB.

Table 4.2.7.2

Road Name	Reference Points	Pavement Design / millions of standard axles (msa)	Design Life	Analytical Approach Design Method (HD 26) Permitted
New A9 Trunk Road	N1 to N3	11.6	40	No

- 4.2.7.3 The existing pavement between Reference Points R1 and R2 shall be made grubbed up and treated in accordance with Section 4.2.6.1 (vii) of Part 1.
- 4.2.7.4 The Design shall ensure that:
- (i) The surface course system shall be provided on the new A9 trunk road in accordance with Section 4.2.7.4 (vi) (a) of Part 1;
  - (ii) High Modulus Base Material with 35 penetration grade binder (HMB35) shall not be permitted; and
  - (iii) The new A9 Trunk Road surface course shall, if specified to TS2010, achieve the Minimum mean Grip Numbers stated in Table 2.5 for Site Class 3, throughout the scheme extents.
- 4.2.7.5 Contact details in connection with the application of approved polymer modified binder based thin surface course to surface course specification TS2010 are:

- (i) Transport Scotland, Trunk Roads and Bus Operations

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

- 4.2.7.6 Road pavement for Accesses, Access Roads / Tracks and Accommodation Works tracks are detailed in Employer's Requirements Part 3 Appendix A, Table 3.

The Design shall ensure that:

- (i) Surfaced access construction shall comprise of: 300 millimetres thick type 1 sub-base to clause 803 of the Specification, 100 millimetres thick Dense Bitumen Macadam to clause 906 of the Specification, 50 millimetres thick Close Graded Bitumen Macadam to clause 912 of the Specification and capping in accordance with clause 613 of the Specification where required;
- (ii) Unsurfaced tracks shall comprise of: 300 millimetres thick type 1 sub-base to Clause 803 of the Specification and 150mm capping in accordance with clause 613 of the Specification where required; and
- (iii) Accommodation Works tracks shall be constructed in line with the requirements of Appendix 1/15 of the Specification.

#### 4.2.8 Kerbs, Footways and Paved Areas

- 4.2.8.1 Contact details in connection with the Design for all NMU facilities associated with the trunk road are:

- (i) Transport Scotland, Trunk Roads and Bus Operations

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

- 4.2.8.2 The Design shall ensure that:

- (i) The new layby identified in Appendix A of Part 3 shall include a footway of 2.0 metres width which follows the gradient of the new mainline;
- (ii) The footway at the rear of the new layby shall be surfaced with hot rolled asphalt surface course;
- (iii) The footway at the rear of the new layby shall have a raised kerb, with a 2.0 metre wide dropped kerb section accompanied with buff coloured tactile paving for access to and from the layby;
- (iv) Handrails shall be provided at all locations along the footway that have a gradient greater than 5%;
- (v) The footpath to the cemetery identified in Appendix A of Part 3 shall be designed in accordance with the 'Disability Discrimination Act: Good Practice Guide' and Transport Scotland's 'Roads for All – Good Practice Guide for Roads' and shall have a maximum gradient of 5%; and
- (vi) The footpath to the cemetery shall be constructed of Type 1 subbase material with crushed rock dust on the surface.

The Contractor shall provide the Engineer with the completed Consultation Certificate(s) in accordance with the Certification Procedure.

#### 4.2.9 Traffic Signs, Road Markings and Studs

##### General

4.2.9.1 The Contractor shall consult and comply with the requirements of:

- (i) Transport Scotland, Trunk Roads and Bus Operations

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

in connection with all details for the provision of all traffic signs, road markings and studs for the new Trunk Roads stated in Appendix A of Part 3.

The Contractor shall provide the Engineer with the completed Consultation Certificate(s) in accordance with the Certification Procedure.

4.2.9.2 The Design shall ensure that:

- (i) Traffic Signs, Road markings and hazard marker posts shall be designed and installed as per Transport Scotland's Advice and Procedure Guide: APG\_E115;
- (ii) Essential compensatory measures identified in any Departures from Standard shall be provided; and
- (iii) Size and siting of all road signage shall be in accordance with the Traffic Signs Regulations and General Directions and the Traffic Signs Manual.

##### Traffic Sign Posts

4.2.9.3 All trunk road Directional and Route Confirmatory Signs shall include Gaelic translation in accordance with the Traffic Signs Regulations and General Directions 2016.

4.2.9.4 Contact details in connection with maintaining existing sign information during construction of the Works are:

- (i) Transport Scotland, Trunk Roads and Bus Operations

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

- (ii) BEAR Scotland Ltd

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

##### Markers

4.2.9.5 Contact details in connection with the locations for the CHART link and section node markers are:

- (i) Transport Scotland, Trunk Roads and Bus Operations

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

#### Traffic Bollards

4.2.9.6 Refer to Section 4.2 of Part 1 – General Requirements.

#### **4.2.10 Road Lighting**

4.2.10.1 Refer to Section 4.2 of Part 1 – General Requirements.

### 4.3 Structures General Requirements

#### 4.3.1 General

4.3.1.1 Refer to Section 4.3 of Part 1 – General Requirements.

4.3.1.2 Contact details with regard to the Design, construction, completion and maintenance of all Structures adjacent to watercourses are:

(i) SEPA

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

(ii) SNH

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

4.3.1.3 Contact details for Statutory Undertakers in connection with the design for the layout and location of apparatus, over, through and adjacent to Structures and the method of access to such apparatus are:

(i) BT Openreach

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

(ii) Scottish Water

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

(iii) Scottish and Southern Energy

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

(iv) Vodafone

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

and any other Relevant Statutory Undertaker.

#### 4.3.2 Design Loading

4.3.2.1 The model factor  $\gamma_{sd;K} = 1.2$  defined in PD 6694-1 clause 4.7 shall be applied to horizontal earth pressures coefficients ("K" values) in accordance with PD 6694-1 clause 4.7. The model factor  $\gamma_{sd;K}$  should not be applied to earth pressures in the design of embedded walls nor to the effects of traffic surcharge, nor in calculating  $K^*$ , nor for serviceability limit states.

4.3.2.2 In checking the stable equilibrium and soil deformation, retaining walls should be designed assuming a depth of unplanned excavation in front of the wall.

- 4.3.2.3 The depth of the excavation should be not less than 10% of the total height retained for cantilever walls or of the height retained below the lowest support level for propped or anchored walls, but the depth of the excavation may be limited to 0.5m. This recommendation for an additional excavation as a design criterion is to provide for unforeseen and accidental events.
- 4.3.2.4 The recommended values should be reviewed for each design; more adverse values should be adopted in particular critical or uncertain conditions but smaller values may be adopted where adverse conditions are beyond reasonable doubt.
- 4.3.2.5 Foreseeable excavations such as service or drainage trenches in front of a retaining wall, which may be required at some stage in the life of the structure, should be treated as a planned excavation. Structure SDS documents shall record the proposed allowance for unplanned excavation for review and acceptance by the TAA.

#### **4.3.3 Structural Form**

- 4.3.3.1 The use of gabions shall not be permitted in any part of the Design and the Permanent Works with the exception of where gabions are used to provide scour protection at culverts.
- 4.3.3.2 The use of gabion retaining structures shall not be permitted in any part of the Design and the Permanent Works.

#### **4.3.4 Durability**

- 4.3.4.1 The requirements of BRE Special Digest 1:2005 'Concrete in Aggressive Ground Conditions' shall be satisfied for any structural concrete used on the site.

#### **4.3.5 Resin Anchors**

- 4.3.5.1 Refer to Section 4.3 of Part 1 – General Requirements.

#### **4.3.6 Reinforced Soil**

- 4.3.6.1 Refer to Section 4.3 of Part 1 – General Requirements.

#### **4.3.7 Existing Structures**

- 4.3.7.1 The existing retaining wall from chainage 25m to 65m (southbound) will become buried when new fill to form the earthworks is placed in front of the structure and shall not be relied on or incorporated into the permanent works design. For the purposes of analysis and future maintenance the structure shall be assumed to be redundant. The wall shall remain in place to support the existing road during construction.
- 4.3.7.2 The Design shall ensure the stability and integrity of the wall and existing highway is maintained throughout the works.
- 4.3.7.3 The existing retaining wall to the south of the cemetery, retaining the cemetery above the existing southbound carriageway, shall not be relied on or incorporated into the permanent works design. The existing wall can remain in place but shall be broken down to 1m below finished ground level. Alternatively the Contractor can demolish the wall.
- 4.3.7.4 Weep holes shall be drilled through each of the two existing walls, prior to placing new fill, to ensure adequate paths for future groundwater flow. Appropriate measures shall be employed to prevent loss of fines throughout the design life

#### **4.3.8 Particular Requirements for Structures**

##### **ST01 – Buried Piled Sub-Structure**

- 4.3.8.1 Notwithstanding any other provisions of the Contract, the buried piled sub-structure ST01 from approximate chainage 65m to 115m shall be piled and shall meet the following requirements:
- (i) (a) The structure shall be capable of supporting the combined pressures resulting from the full height of existing superficial deposits (from finished ground level to bedrock level) and the new road earthworks in the event that the existing superficial deposits in front of the sub-structure are removed or cease to provide adequate support to the new road earthworks (ie. due to long term slope movements of the adjacent steeper coastal slopes);  
(b) The structure shall be designed for worst credible groundwater pressures on the basis that the drainage system is not effective whilst complying with the requirements of Employer's Requirements Volume 3 Part 2 Specific Requirements Clause(s) 4.3.11.2 (and 4.3.8.1);
  - (ii) The structure shall be capable of performing its function without further maintenance or modification after any part of the structure is exposed due to soil movement;
  - (iii) The structure shall not adversely impact the hydrology of the area, or create new preferential subterranean water flow pathways which could lead to piping or slope saturation close to or remote from the structure;
  - (iv) The structure shall not permit loss of fines from the retained soil;
  - (v) The line and extents of the structure shall be offset from the toe of the reinforced soil so that the entirety of the reinforced soil is behind and supported by the structure;
  - (vi) All elements of the structure shall be buried such that they are not visible at the ground surface;
  - (vii) The construction of the structure shall be completed before commencing construction of the reinforced soil embankment; and
  - (viii) The structure shall have a design life of 120 years.
- 4.3.8.2 If an anchor system is used it shall meet the following requirements:
- (i) The anchor system shall be of a type that requires minimum maintenance, inspection and monitoring over the Design life of the structure;
  - (ii) Pre-stressed and/or post-stressed anchors are not permitted;
  - (iii) The reaction system of the anchors shall be located to minimise maintenance requirements;
  - (iv) The ground anchors shall have a design life of 120 years; and
  - (v) The ground anchors shall be double corrosion protected with factory produced encapsulation and purpose made components for connections in the tensile components and reaction system.
- 4.3.8.3 The deflection tolerance of the structure, and ground anchorage system if used, is dictated by the durability requirements of the structure and ground anchorages, the serviceability requirements for the road, utilities and drainage infrastructure in the road, the serviceability limits of the reinforced soil elements above.

#### **4.3.9 Fill to Structures**

##### **4.3.9.1 Use of Spent Oil Shale (Blaise)**

With reference to HD 35, the use of Spent Oil Shale (Blaise) is not permitted

as selected granular fill to structures.

#### **4.3.10 Structural Finish**

4.3.10.1 Finish of the piled buried sub-structure (ST01) shall be F1.

#### **4.3.11 Structural Drainage**

##### **ST01 – Buried Piled Sub-Structure**

4.3.11.1 The structural drainage shall include a drainage system to allow paths of water flow from the rear of the structure through the structure; and

4.3.11.2 The structure shall be designed such that the conditions of Clause 4.3.8.1 (iii) and (iv) in this Part 2 are met.

#### **4.3.12 Maintenance and Inspection**

##### **ST01 – Buried Piled Sub-Structure**

4.3.12.1 Provision shall be made to ensure that the Buried Sub-Structure can be accessed safely by foot for the purpose of future Maintenance and Inspection.

#### **4.4 Environmental Criteria**

##### **4.4.1 General Requirements**

4.4.1.1 Refer to Part 1 – General Requirements.

##### **4.4.2 Indicative Landscape and Planting Works Drawings**

4.4.2.1 Scheme specific requirements for the Planting Works are outlined on the Indicative Landscape and Planting Works Drawings, as listed in Appendix 0/4 of the Specification.

##### **4.4.3 Qualified Professional Assistance**

4.4.3.1 Contact details in connection with approvals for the appointment of the Landscape Architect, Landscape Clerk of Works are:

(i) Transport Scotland

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

4.4.3.2 Contact details in connection with approvals for the appointment of the archaeologist are:

(i) Transport Scotland's Historic Environment Advisor

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

4.4.3.3 Contact details in connection with approvals for the appointment of the Ecological Clerk of Works are:

(i) Scottish Natural Heritage

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

##### **4.4.4 Environmental Design and Mitigation**

###### **4.4.4.1 Air Quality and Dust**

Contact details in connection with air quality and the reduction of dust nuisance are:

(i) Highland Council

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

###### **4.4.4.2 Re-Use of Materials and Waste Management**

Contact details in connection with Site Waste Management and the disposal of waste materials that cannot be recycled are:

(i) SEPA

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

The Contractor shall prepare a Waste Management Plan in accordance with Section 1.9.6 of Part 1, which should include details of how the minimisation of waste on site will be achieved and demonstrate adherence to Scotland's Zero Waste Plan. The Contractor shall consult and comply with SEPA with respect to Site Waste Management and recycling of material.

#### 4.4.4.3 Water Quality and Drainage

- (i) The Contractor's Ecological Clerk of Works shall oversee construction works specifically including works in the vicinity of the Berriedale Water.
- (ii) The Contractor shall consult and comply with the requirements of the Caithness District Salmon Fisheries Board.

Contact details in connection with water quality and drainage and the use of approved herbicides on embankments, cuttings and verges in proximity to watercourses are:

- (i) SEPA
  - Contact person: [REDACTED]
  - Email: [REDACTED]
  - Telephone number: [REDACTED]
- (ii) Caithness District Salmon Fishery Board
  - Contact Person: [REDACTED]
  - Email: [REDACTED]
  - Telephone Number: [REDACTED]

Contact details in connection with monitoring water quality during construction, completion and maintenance of the Works are:

- (i) SEPA
  - Contact person: [REDACTED]
  - Email: [REDACTED]
  - Telephone number: [REDACTED]
- (ii) Caithness District Salmon Fishery Board
  - Contact Person: [REDACTED]
  - Email: [REDACTED]
  - Telephone Number: [REDACTED]

The Contractor shall provide the Engineer with the completed Consultation Certificate(s) in accordance with the Certification Procedure.

- (i) SuDS detention basins or otherwise, required as part of the road drainage system, shall:
  - (a) be designed to integrate with the surrounding landscape and provide habitat for wildlife;
  - (b) be sited within naturally low lying areas and have earthworks with smooth flowing contours to integrate seamlessly with the surrounding landform;
  - (c) avoid abrupt changes in slope, sharp angles and steep side slopes;

- (d) have perimeter access tracks that are at existing grade or in cutting, where possible, to avoid a bunded appearance;
- (e) include grading out of the outer slopes to varied slope angles to tie in with the surrounding landform where access tracks and paths are required to be on embankment;
- (f) be designed with gradients of the inner slopes varied along their length to reflect the naturally occurring topography of the immediate surroundings, varying the distance of the access track / path from the SuDS detention basin or otherwise to accommodate this;
- (g) have bank slopes no steeper than 1:3 at any point and shallower where possible with varied microtopography and avoiding straight batters;
- (h) include the localised compression and loosening of the soil to allow a variety of different plant communities to establish;
- (i) have a presumption against the provision of fencing – if fencing is deemed appropriate following a suitable risk assessment in accordance with Section 4.2.3.4 of Part 1 it shall be as unobtrusive as possible, with the fence type and alignment designed to minimise visual impact;
- (j) have planting to help screen hard elements including any fencing, outlet and inlet structures, enhance wildlife habitat and provide visual interest;
- (k) have adjacent open ground around the SuDS detention basins or otherwise seeded with semi-natural vegetation/wildflowers to provide added wildlife habitat and visual interest;
- (l) include planting of native marginal aquatic species in flatter areas in the base of SuDS detention basins;
- (m) include sowing of temporarily wet areas of the sloping banks within detention basins or otherwise sown with species rich / wet grassland; and
- (n) include an informal, unbound section of track to permit occasional vehicular and pedestrian access to any inlet and outlet structures – it should not surround the entire SuDS detention basin. A section of track for pedestrian access shall be provided around the remainder of the SuDS detention basin. The track shall be designed to be as unobtrusive as possible and reflect the rural nature of the site.

#### 4.4.4.4 Planning and Land Use

Contact details in connection with planning policies and any statutory planning consents required in respect of the Design, construction and completion of the Works are:

(i) Highland Council

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

#### 4.4.4.5 Ecology and Nature Conservation

Contact details in connection with any species or Sites protected by legislation which are likely to be affected by the Design, construction, completion and maintenance of the Works including hard and soft landscape are:

- (i) SNH
  - Contact person: [REDACTED]
  - Email: [REDACTED]
  - Telephone number: [REDACTED]
- (ii) Caithness District Salmon Fishery Board
  - Contact Person: [REDACTED]
  - Email: [REDACTED]
  - Telephone Number: [REDACTED]

The Design shall include ecological impact mitigation and habitat creation associated with riparian corridors affected by the proposals. The Contractor shall consider the guidance provided in "Otters and Development" (SNH, 2008).

The Design shall ensure:

- (i) There shall be no access of plant, machinery or construction personnel to the East Caithness Cliffs Special Area of Conservation or the Berriedale Cliffs Site of Special Scientific Interest. The Contractor shall make all construction personnel aware of the presence of these designated sites and shall install signage, as required, to ensure that the area covered by these designations is clearly identified;
- (ii) The Contractor shall implement all pollution prevention measures necessary to ensure that there is no pollution of the East Caithness Cliffs Special Protection Area, the East Caithness Cliffs Special Area of Conservation, the Berriedale Cliffs Site of Special Scientific Interest, the Berriedale and Langwell Water Special Area of Conservation and the Berriedale Water Site of Special Scientific Interest;
- (iii) All habitat which is suitable for supporting breeding birds which is to be lost to the Works will be cleared outside of the breeding bird season, which is generally taken to be March to August, inclusive;
- (iv) All blasting, impact driven piling and percussive anchor drilling that is to be carried out must be outside of the breeding bird season, which is generally taken to be March to August, inclusive;
- (v) The Contractor shall ensure that this habitat is maintained in such a way as to remain unsuitable to nesting birds;
- (vi) If vegetation clearance cannot be completed outside of the breeding bird season then pre-Works checks must be carried out by the Ecological Clerk of Works or another specialist with relevant expertise in ornithology. Pre-Works checks for breeding birds must take place no longer than 48 hours prior to vegetation being cleared;
- (vii) Any confirmed or suspected nest sites shall be appropriately demarcated using, for example, post and rope fencing. A suitable exclusion zone shall be established around all active nest sites, the size of which will be determined in consultation with SNH. No Works shall be permitted within these exclusion zones until it has been confirmed by the Ecological Clerk of Works or another specialist with

- expertise in ornithology that the young have fledged the nest or the breeding attempt has otherwise ended;
- (viii) The Contractor shall otherwise comply at all times with all of the requirements of the legislation protecting breeding birds;
  - (ix) The Contractor shall be informed and take note of any pre-construction bat surveys undertaken, and shall liaise with Scottish Natural Heritage to obtain any necessary licence(s) prior to works on or adjacent to the relevant trees. The Contractor shall adhere to all conditions stipulated in any such licence and provide any required mitigation;
  - (x) The use of lighting shall be avoided during the construction period within 20m of the trees marked in the 2018 Ecology Surveys Update Report as listed in Appendix Q of Part 3 which have been identified as having bat roost potential, until it has been confirmed that these trees do not support roosting bats;
  - (xi) The Contractor shall otherwise comply at all times with all of the requirements of the legislation protecting bat species and their places of shelter;
  - (xii) The Contractor shall liaise with Scottish Natural Heritage to transfer or re-apply for a derogation licence previously obtained by the Employer for the destruction of the otter refuge on the Berriedale Water, as identified in the Ecology Report, the SNH License Application Form for Otters and the Otter Protection Plan in Appendix Q of Part 3, prior to commencement of the Works. The Contractor shall adhere to all conditions stipulated in any such licence and provide any required mitigation;
  - (xiii) The Contractor shall be informed and take note of any pre-construction otter and badger surveys undertaken, and shall liaise with Scottish Natural Heritage to obtain any necessary licence(s) prior to carrying out any works which may cause disturbance or destruction of such protected species refuges. The Contractor shall adhere to all conditions stipulated in any such licence and provide any required mitigation;
  - (xiv) The Contractor shall otherwise comply at all times with all of the requirements of the legislation protecting otters and their places of shelter;
  - (xv) Prior to Works commencing, the Contractor shall trim all vegetation in areas of unmanaged grassland and heath habitat which may be suitable for reptiles. Vegetation, including grass and bracken, must be reduced to a height of 5 cm or less. The arisings must be removed from the Works area but could be retained in a suitable location, as directed by the Ecological Clerk of Works, to create potential refuge habitat for various species;
  - (xvi) Strimming should take place outside of the period March to September, inclusive, to minimise the risk to reptiles and breeding birds. Where this is not possible, great care must be taken when strimming and any reptiles observed must be given the opportunity to escape. A nesting bird check must also be carried out prior to strimming if this takes place during the period of March to August, inclusive;
  - (xvii) The rock pile shown in the 2017 GI Ecology Survey Report as listed in Appendix Q of part 3 has been identified as providing suitable refuge and basking habitat for reptiles. The rocks which make up this pile

must be lifted by hand to check for the presence of reptiles. Any reptiles found during this exercise should be taken to a suitable location nearby, as directed by the Ecological Clerk of Works, which will not be directly affected by the Works. Once the rock pile has been checked by hand, it must be translocated to a suitable location within the area of gorse scrub habitat to the west of the graveyard, under the supervision of the Ecological Clerk of Works;

- (xviii) A significant area of the new road verges must be left unplanted with trees to allow natural regeneration and succession of grassland, scrub and eventually trees. This can be achieved by adhering to the Indicative Landscape and Planting Works Drawings as listed in Appendix 0/4 of the Specification, which include substantial areas of sown grassland on the new verges;
- (xix) The Contractor shall otherwise comply at all times with all of the requirements of the legislation protecting reptiles; and
- (xx) The Contractor shall implement pollution prevention measures to protect the aquatic environment and, in particular, the Berriedale Water.

#### Cultural Heritage Interests

4.4.4.6 Not Used.

4.4.4.7 Contact details in connection with any cultural heritage interests which shall likely be affected by the Design, construction, completion and maintenance of the Works including the landscape Design are:

- (i) Transport Scotland's Historic Environment Advisor

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

- (ii) Highland Council Environmental Advice & Consultancy Archaeologist (local authority archaeologist advising the scheme on fieldwork methodology and planning matters)

Contact Person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

- (iii) Historic Environment Scotland (for matters relating to Scheduled Monuments, Category A Listed Buildings, Registered Battlefields, Registered Gardens and Designed Landscapes)

Email: [REDACTED]

4.4.4.8 The Contractor shall ensure that Scheduled Monuments, Listed Buildings, and archaeological sites and any other sites of archaeological interest or archaeological remains identified as requiring protection by Historic Environment Scotland and/or Transport Scotland's Historic Environment Advisor within the vicinity of the Site shall not be adversely affected by the Design, construction and completion of the Works without written consent from Historic Environment Scotland and/or Transport Scotland's Historic Environment Advisor as applicable.

4.4.4.9 Archaeological mitigation may also be required for any temporary construction compounds, depending on their location and the nature of their construction. The stripping of an area for use as a compound will have the potential to

impact on near surface archaeological remains, and any groundworks to this effect may require monitoring by an archaeological contractor.

4.4.4.10 Not Used

4.4.4.11 The Contractor shall ensure that the archaeological contractor carrying out the mitigation works is allowed sufficient time to carry out the work to the standards required by the Chartered Institute for Archaeologists.

4.4.4.12 In the event of archaeological remains being discovered during the construction works, the Contractor shall cease work in the vicinity, erect temporary fencing around the remains, and the Contractor shall immediately inform the Engineer and Transport Scotland's Historic Environment Advisor in writing of the nature and location of the discovery. The Contractor shall not carry out any further Works within the fenced off area until written approval to do so has been given by the Engineer following consultation with Transport Scotland's Historic Environment Advisor.

4.4.4.13 The Contractor shall store any finds in a suitable location until such time as the final repository for the finds has been determined by the Scottish Archaeological Finds Allocation Panel, and instructions for the transfer to the final repository have been received.

4.4.4.14 Where the need for additional archaeological mitigation measures is identified, the Contractor shall submit a WSI detailing the mitigation measures proposed for the approval of the Engineer and Transport Scotland's Historic Environment Advisor. The WSI shall also detail the approach to post-excavation assessment and reporting. No archaeological mitigation measures within the fenced area shall be undertaken until the WSI has been approved in writing by the Engineer following consultation with Transport Scotland's Historic Environment Advisor.

4.4.4.15 Upon completion of mitigation measures, the Contractor shall prepare a Post-Excavation Assessment and Mitigation Excavation Assessment Report including a Justified Update Project Design (UPD) including Research Objectives for further analysis and a publication strategy. This shall be issued to the Engineer and Transport Scotland's Historic Environment Advisor for comment and agreement.

4.4.4.16 The programme and proposals for post-excavation analysis and publication shall be agreed with the Engineer following consultation with Transport Scotland's Historic Environment Advisor. After receipt of written instruction from the Engineer, the Contractor shall undertake the post-excavation analysis and publication in accordance with the agreed programme and proposals.

4.4.4.17 Within 8 months of the instruction to proceed with analysis and publication the Contractor shall prepare a report detailing the results of the mitigation excavation assessment and analysis. A draft copy of this report shall be provided to the Engineer and Transport Scotland's Historic Environment Advisor for review and comment. In finalising the report, the Contractor shall take into account any comments made by the Engineer and Transport Scotland's Historic Environment Advisor and remedy any faults identified. The finalised report shall be submitted to the Engineer for approval, including the identification of the preferred publication medium, to the Engineer and Transport Scotland's Historic Environment Advisor.

4.4.4.18 The Contractor shall submit a digital copy of all reports to the National Record for the Historic Environment (NRHE) and the Highland Heritage Historic Environment Record within 12 months of their acceptance by the Engineer and Transport Scotland's Historic Environment Advisor.

- 4.4.4.19 The Contractor shall, within 8 months of publication, prepare an archive and procure the deposition and long-term storage of each archive in the HRHE.
- 4.4.4.20 On completion of all fieldwork, the Contractor shall submit a brief report to Discovery and Excavation in Scotland (DES).

#### Traffic Noise and Vibration

- 4.4.4.21 Should an exceedance of the traffic noise levels stated in the Stage 3 Environmental Report be identified through measurements after opening, the Contractor shall report this to the Engineer. Where practicable suitable mitigation measures to reduce the noise levels to those specified in 4.4.4.25 (i) of Part 1 having due regard for the requirements of the Contract shall be submitted to the Engineer. Should further mitigation measures not be considered practicable by the Contractor, the Contractor shall provide justification to the Engineer.
- 4.4.4.22 The Contractor shall provide or update mitigation measures at the request of the Engineer, addressing any comments or instructions made by the Engineer. The Contractor shall implement the mitigation measures once approved by the Engineer.

- 4.4.4.23 Contact details in connection with construction noise related issues are:

(i) Highland Council

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

- 4.4.4.24 Visual Impact

Visual Impact shall be mitigated for the following visual receptors:

- (i) users of the existing roads;
- (ii) residents in all adjacent properties; and
- (iii) users of all adjacent public buildings, work places, footpaths and bridleways.

## 4.4.5 Scheme Specific Landscape Design Requirements

### Landscape Drawings

- 4.4.5.1 Notwithstanding any other provision of the Contract, the landscape Design drawings shall be at an appropriate scale to show the nature and extent of the landscape Design.
- 4.4.5.2 The overall landscape Design shall be illustrated at a minimum scale of 1:500.
- 4.4.5.3 Cross sections, detail areas and otherwise shall be at a scale sufficient to show the detail of the Design.
- 4.4.5.4 The drawings shall show, but not be limited to, the following:
- (i) landform by levels, contours, gradients and the transition of gradients;
  - (ii) planting layout, species and planting densities;
  - (iii) seeding layout, species mix and rates of application;
  - (iv) layout and details of any areas of special treatment, including SuDS structures etc; and
  - (v) layout and details of all areas that require to be protected.

#### 4.4.5.5 Scheme Specific Landscape Integration and Mitigation

The landscape Design shall provide integration of the Works with the surrounding landscape and built environment together with any other mitigation measures identified in the Stage 3 Environmental Report Documents.

The overall landscape Design philosophy generally shall respond to or reflect the landscape through which it passes and shall reflect the largely agricultural and coastal landscape by the inclusion of planting of predominantly native trees and shrubs appropriate to the locality.

#### 4.4.5.6 Contact details in connection with the landscape design approvals are:

(i) Transport Scotland

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

(i) Transport Scotland Historic Environment Advisor

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

The Contractor shall provide the Engineer with the completed Consultation Certificate(s) in accordance with the Certification Procedure.

### 4.4.6 Protection of Existing Vegetation

#### 4.4.6.1 The Design shall ensure that:

- (i) all existing trees and vegetation within the Site shall be retained and preserved except where they shall be required to be removed to accommodate the Design.

#### 4.4.6.2 The Contractor shall submit drawings indicating his proposals for clearance of existing trees and vegetation within the Site to the Engineer for agreement not less than ten working days prior to commencement of site clearance works. Such drawings shall clearly indicate the location and extent of areas of trees and vegetation to be removed and to be retained, and trees and vegetation to be protected in accordance with section 4.4.6 of Part 1.

### Existing Landscape Features

#### 4.4.6.3 The Design shall ensure that:

- (i) all existing dry stone walling and other built landscape, prominent features and local landmarks within the Site shall be retained and preserved except where they shall be required to be removed to accommodate the Design.
- (ii) where dry stone wall is removed to accommodate the Design, it shall be stored and reinstated using traditional techniques on a new line. Re-used stone shall be placed with existing lichen, if present, on the outside of the wall.

### 4.4.7 Landscape and Earthworks Design Requirements

#### 4.4.7.1 The landform design and construction shall achieve the following:

- (i) slope gradients shall vary along the length of the embankment or cutting to reflect the surrounding natural topography and avoid constant slope gradients;

- (ii) slope gradients shall vary in cross section with varied microtopography to reflect the surrounding natural topography, avoiding straight batters at a constant gradient;
- (iii) Not used;
- (iv) where land may be returned to the previous landowner, graded out slopes shall be prepared and seeded in accordance with the Indicative Landscape and Planting Works Drawings; and
- (v) where strengthened earthworks or reinforced soil slopes are adopted in the Design hard facings shall not be permitted, soil nail heads and mesh shall be concealed and the slopes shall be vegetated to minimise visual impact.

#### **Additional Landform Integration**

4.4.7.2 In addition to the landform and grading shown on the Indicative Landscape and Planting Works Drawings the Contractor may also carry out additional landform Design through raising existing ground levels in the locations shown on the Indicative Landscape and Planting Works Drawings. Any such modifications shall meet the general requirements set out in this Section 4.4 Environmental Criteria and Part 1- General Requirements.

#### **4.4.8 Planting Design**

4.4.8.1 Changes to the planting Design may be permitted where appropriate only in locations where the Design differs significantly from that indicated on the Indicative Landscape and Planting Works Drawings as listed in Appendix 0/4 of the Specification.

4.4.8.2 The various species and sizes of trees and shrubs incorporated in the Design shall be arranged in such a way that they create either natural woodland characteristics typical in the locality or a designed landscape feature.

4.4.8.3 The Design shall ensure that areas disturbed during the construction of the Works shall be reinstated with a vegetation cover similar to that in areas adjacent to the disturbed area except for areas of planting, land reinstated for arable agricultural purposes and areas of wildflower seeding.

4.4.8.4 Contact details in connection with the planting design approvals are:

- (i) Transport Scotland

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

#### **Plant Selection and Proof of Provenance**

4.4.8.5 The following plants shall not be permitted in the Works:

- (i) Gorse;
- (ii) Broom;
- (iii) Sycamore;
- (iv) Bare root evergreens; and
- (v) Bare root birch.

4.4.8.6 The following plant stock to be used in the Design shall be in accordance with Appendix 30/6 of the Landscape Specification and selected from the following types:

- (i) standard, heavy standard and extra heavy standard trees;

- (ii) feathered and standard trees, with rabbit protection;
- (iii) 1+1 transplanted trees;
- (iv) 1+1 transplanted trees, protected by tree shelters;
- (v) cell grown trees, protected by tree shelters; and
- (vi) container grown plants grown in containers of 2 litres minimum size, protected by tree shelters.

4.4.8.7 All planting areas shall be protected from damage by deer, rabbits hares and livestock until the end of the Period of Establishment Maintenance. Protective measures shall be in place at the time of planting to ensure that no damage occurs. All evergreen trees shall be protected by tree or shrub shelters as appropriate, with stakes.

4.4.8.8 Shelters and stakes shall be removed from the Site before the end of the Period of Establishment Maintenance with the agreement of the Engineer and shall become the property of the Contractor.

#### Extent of Planting

4.4.8.9 The Design shall ensure that:

- (i) only grass shall be planted within 3 metres of a carriageway and no trees within 5 metres; and
- (ii) only verge amenity grass or dry meadow mix shall be sown within 3 metres of a carriageway unless written consent shall be granted by the Engineer.

#### Grass and Herbaceous Vegetation Specific Design Requirements

4.4.8.10 The seeding design shall be as the Indicative Landscape and Planting Works Drawings, as listed in Appendix 0/4 of the Specification, with grass seed mixture for roadside verges and visibility splays, and species rich grassland for planting areas, general slopes and embankments and detention basins. In addition, the planting Design shall include herbaceous planting associated with detention basins and wildlife ponds.

#### Management of Existing Vegetation General Design Requirements

4.4.8.11 The written action report of remedial management measures shall include, but shall not be limited to:

- (i) felling or pruning of any dead, diseased or unsafe trees or plants blocking signs and lines of sight;
- (ii) thinning of any existing overcrowded trees and shrubs to allow better specimens to grow, improve habitat value or reduce shading to adjacent houses and gardens;
- (iii) coppicing of overgrown trees and shrubs to allow growth of new shoots; and
- (iv) measures to mitigate the potential for wind throw in areas of trees affected by the Works.

### 4.4.9 Scheme Specific Environmental Requirements

Refer to Part 1 – General Requirements.

### 4.5 Settlement

4.5.1 Refer to Part 1 – General Requirements.

### 4.6 Instrumentation

- 4.6.1** Refer to Part 1 – General Requirements.
- 4.6.2** The Contractor shall maintain and keep all groundwater monitoring instrumentation accessible throughout the execution and completion of the Works. Any instrumentation found to be damaged or defective shall be repaired or replaced by the Contractor as soon as practicable. Existing groundwater monitoring instrumentation is listed in Section 4.6.4 below.
- 4.6.3** All boreholes with monitoring wells that are no longer required, including those in dry condition, shall be decommissioned by the Contractor in accordance with the requirements of the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR) and SEPA guidance on “Decommissioning Redundant Boreholes and Wells”.
- 4.6.4** The Contractor shall be responsible for the management and maintenance of the existing wells and ground monitoring installations as detailed in Table 4.6.4 below:

Table 4.6.4 Existing Groundwater Monitoring Installations

Hole Number	Coordinates		Response Zone (mbgl)		Installation Diameter (mm)
	Easting	Northing	Top	Bottom	
<b>2013 Ground Investigation</b>					
BH01	311987.587	922840.709	0.90	3.60	19
BH02	312012.972	922831.996	3.00	5.00	19
BH03	312024.745	922793.780	1.00	2.50	19
BH04	312051.09	922811.69	1.00	7.00	19
			8.00	16.25	19
BH05	312065.25	922764.27	1.00	7.00	19
			8.00	16.25	19
BH06	312097.482	922775.707	1.00	2.50	19
BH07	312087.924	922732.216	0.90	8.10	19
BH09	312098.558	922683.517	8.00	12.65	19
BH10	312071.140	922692.270	8.00	10.00	19
BH11	312064.163	922668.885	1.00	11.50	19
BH12	312011.934	922660.156	0.90	3.40	19
BH13	312025.051	922674.144	1.80	4.50	19
BH14*	312057.58	922697.3	1.00	3.50	50
			7.50	12.80	19
BH15*	312089.268	922660.071	1.00	7.40	50
<b>2014 Ground Investigation</b>					
BH101	312074.500	922681.700	5.00	8.00	19
BH102	312093.04	922664.07	1.00	4.20	50
			7.60	9.00	19
BH103	312095.300	922650.400	10.40	12.40	19
BH104	312068.042	922619.086	10.80	12.80	19
BH105	312065.877	922653.858	9.00	12.00	19
BH106	311888.012	922764.033	3.00	6.00	50
BH107	311920.982	922725.982	1.00	7.70	50
BH108	311961.578	922888.331	3.00	5.20	50
BH109	311880.089	922736.129	1.00	4.20	50
<b>Supplementary Ground Investigation</b>					
BH201	311994	922866	1.00	4.00	50
BH202B	312079	922812	10.50	19.80	50
BH203	312141	922756	1.00	8.50	50
BH204	312029	922754	3.00	4.50	19
			6.00	11.70	50
BH205	312074	922727	0.50	4.00	50
			4.50	5.50	19
BH206	312074	922708	1.50	8.00	50
BH207	312088	922671	7.00	8.00	19
BH208	312059	922658	1.00	11.00	50
BH209	312032	922636	1.00	7.00	50

**4.7 Contaminated Land**

**4.7.1** Contact details in connection with treatment and disposal of all contaminated materials are:

(i) SEPA

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

(ii) Highland Council

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

The Contractor shall select materials suitable for the environment in which they shall be placed taking into account the presence of known or suspected contaminants and shall refer to appropriate guidance in the selection of materials.

**4.8 Requirements for Intelligent Transport Systems****4.8.1 General**

Not Used

**4.8.2 Provision of Intelligent Transport Systems Works**

There will be no Intelligent Transport Systems

**5. UNDERTAKERS WORKS AND PRIVATE APPARATUS WORKS****5.1 General****5.1.1 Existing Private Apparatus**

Contact details for Statutory Undertakers in connection with the location of apparatus and any diversion works are:

## (i) BT Openreach

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

## (ii) Scottish Water

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

## (iii) Scottish and Southern Energy

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

## (iv) Vodafone

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

**5.1.2 Existing Private Water Supplies and Septic Tanks**

Not Used

**5.1.3 Proposed Private Apparatus**

The Contractor shall arrange for water supplies for field troughs as outlined in Appendix 1/15 of the Specification.

**5.2 Advance Indicative Undertakers' Works**

Not used

**6. SUPERVISION, SAMPLING AND TESTING REQUIREMENTS****6.1 Supervision**

**6.1.1** Notwithstanding any other provision of the Contract the Contractor shall ensure that a Designer's Site Representative, supported by a minimum of one engineer (who shall have relevant piled structures/structures experience), a minimum of one experienced and competent engineering works inspector/clerk of works shall be based on the Site throughout the period of the construction, completion and maintenance of the Works unless otherwise consented to in writing by the Engineer. The Designer's Site Representative, engineers and works inspector/clerk of works shall be supplemented by one Chartered landscape architect, one archaeologist, one ecological clerk of works, one environmental landscape clerk of works, and one Chartered geotechnical/geological engineer each with relevant experience of site supervisions as a Designer's site representative within the Design construction and completion process, for specialist Works during the periods when such specialist Works shall be undertaken and during maintenance period as required.

**6.2 Sampling and Testing**

**6.2.1** Refer to Part 1 – General Requirements.

**6.3 Compliance Surveys****6.3.1 General**

**6.3.1.1** Contact details for obtaining the relevant details of the RMMS referencing system are:

(i) Transport Scotland, Trunk Roads & Bus Operations

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

**6.3.2 Deflectograph Surveys (DS) of Flexible Pavements**

**6.3.2.1** Any section of the new A9 trunk road pavement which is not identified by PANDEF as having a residual life greater than that listed below shall be deemed to be a potential defect and shall be subject to further investigation as described in sections 6.3.4.4 to 6.3.4.8 of Part 1.

Road Name	Reference Points	Minimum Residual Life (msa)
New A9 Trunk Road	N1 to N3	10

**7. AS CONSTRUCTED REQUIREMENTS****7.1 General**

7.1.1 Refer to Part 1 – General Requirements.

**7.2 Health and Safety File**

7.2.1 Refer to Part 1 – General Requirements.

**7.3 As-Constructed Records**

7.3.1 Refer to Part 1 – General Requirements.

**7.4 Maintenance Manuals**

7.4.1 Refer to Part 1 – General Requirements.

**7.5 Network Referencing & Inventory**

7.5.1 Inventory Requirements

Contact details in connection with Inventory Requirements are:

- (i) Transport Scotland (Asset Management Branch of Trunk Roads and Bus Operations)

Contact person: [REDACTED]

Email: [REDACTED]

Telephone number: [REDACTED]

**7.6 Building Information Modelling (BIM)**

7.6.1 Refer to Part 1 – General Requirements.

## **8. CERTIFICATION PROCEDURE**

### **8.1 Introduction**

8.1.1 Refer to Part 1 – General Requirements.

### **8.2 Design Certificates and Design Check Certificates**

8.2.1 Refer to Part 1 – General Requirements.

### **8.3 Design Interim Certificates and Design Check Interim Certificates: Staged Procedure**

8.3.1 Refer to Part 1 – General Requirements.

### **8.4 Information to be provided with Design Certificates, Design Check Certificates, and/or Design Interim Certificates and Design Check Interim Certificates**

8.4.1 Refer to Part 1 – General Requirements.

### **8.5 Interim Construction Certificates**

8.5.1 Refer to Part 1 – General Requirements.

### **8.6 Final Construction Certificates**

8.6.1 Refer to Part 1 – General Requirements.

### **8.7 Interim Post Construction Certificates**

8.7.1 Refer to Part 1 – General Requirements.

### **8.8 Final Post Construction Certificates**

8.8.1 Refer to Part 1 – General Requirements.

### **8.9 Consultation Certificates**

8.9.1 Refer to Part 1 – General Requirements.

### **8.10 Temporary Works Certificates**

8.10.1 Refer to Part 1 – General Requirements.

### **8.11 Road Safety Audits**

8.11.1 Refer to Part 1 – General Requirements.

### **8.12 Departures from Standard**

8.12.1 Refer to Part 1 – General Requirements.

### **8.13 Walking, Cycling and Horse-Riding Assessment and Review Requirements**

8.13.1 Refer to Part 1 – General Requirements.

8.13.2 For the purposes of the Walking, Cycling and Horse-Riding Review the Contractor shall follow the procedure for large schemes in accordance with DMRB HD 42.

### **8.14 Provenance Certificates**

8.14.1 Refer to Part 1 – General Requirements.