Appendix A3.2: Outline Construction Environmental Management Plan

1 Introduction and Background to Project

Purpose of the Outline Construction Environmental Management Plan

1.1 In accordance with Design Manual for Roads and Bridges (DMRB) LA 120 'Environmental management plans' (hereafter referred to as DMRB LA 120), an Environmental Management Plan (EMP) has been produced as an appendix to the Environmental Impact Assessment (EIA) Report for the A985 Kincardine Bridge Refurbishment: Piled Viaduct Replacement scheme (hereafter referred to as the proposed scheme). The EMP *'shall set out the conclusions and the actions needed to manage environmental effects identified within the environmental assessment during construction and operation of a development'* (Highways England, Transport Scotland, Welsh Government and Department for Infrastructure Northern Ireland 2020).

1.2 DMRB LA 120 stipulates that an EMP shall be produced at the design stage of the proposed scheme, and refined and updated in advance of construction, and at the end of construction to support future management and operation. For the purposes of this report and to reflect the current stage, the EMP is referred to as the Outline Construction Environmental Management Plan (CEMP).

1.3 This Outline CEMP, appended to the EIA Report, has been developed during the design stage of the proposed scheme. It is expected that this Outline CEMP will be further developed by the Contractor prior to, during and post-construction as appropriate. Post-construction, the CEMP (updated version of this Outline CEMP) will be provided to the Overseeing Organisation for future management and operation.

The Project

1.4 The proposed scheme is located at the southern end of the Kincardine Bridge within the Falkirk Council area. The Kincardine Bridge crosses the Firth of Forth between Higgins Neuk in Falkirk Council area and the town of Kincardine in Fife Council area, as illustrated in Image 1, and is used to carry the A985 Kincardine – Rosyth Trunk Road (A985) over the Firth of Forth via a two-lane single carriageway road.

1.5 The existing piled viaduct structure at the southern end of the Kincardine Bridge is required to be replaced in order to maintain the long-term used of the Kincardine Bridge for all road users. The long-term use of the Kincardine Bridge will contribute to minimising disruption to road users in the surrounding area and the avoidance of traffic delays under normal circumstances.

Image 1: A985 Kincardine Bridge Refurbishment: Piled Viaduct Replacement – Site Location and Context
©Google Maps, April 2020.

1.6 The piled viaduct elements of the Kincardine Bridge structure were deemed substandard in 1984 following completion of an assessment. Interim measures to provide structural support, in the form of a steel propping system were installed in 1992 and remain in place.

1.7 Jacobs prepared an Improvement Options Report in 2007 in which it noted the assessment and interim measure referred to above and reviewed and further developed options for the refurbishment of the existing piled viaduct. The report recommended that the piled viaduct be replaced for the following reasons:

- The original superstructure has insufficient load carrying capacity, with the deck slab and transverse beams having insufficient strength.
- The original substructure is unsuitable for incorporation into the refurbished bridge owing to the poor condition of the visible portions of the substructure piles. Furthermore, the condition of the buried portion of substructure piles cannot be assessed.
- The steel propping system is unsuitable for incorporation in the refurbished bridge.

1.8 The proposed scheme would incorporate:

- the demolition of the existing piled viaduct at the southern end of the Kincardine Bridge;
- replacement of the existing piled viaduct with a new five-span structure of a similar appearance to the adjacent spans of the Kincardine Bridge; and
- temporary construction works.

1.9 In order to maintain traffic flow during construction works, a temporary bridge would be constructed adjacent to the north-west side of the existing piled viaduct. The temporary bridge would connect to the

approach road to the southern end of the Kincardine Bridge. The connection of the temporary bridge to the Kincardine Bridge would be made to the north-east of the existing piled viaduct.

1.10 It is anticipated that the Contractor would undertake the design of the temporary works and construction of the proposed scheme. An indicative temporary bridge design and indicative construction methodology have been assessed during the EIA process and reported in this EIA Report. The indicative construction methodology includes an indicative temporary raised working platform located on either side of the existing piled viaduct and construction site accesses from the A876 and from the existing access track to the existing Sustainable Drainage System (SuDS) pond at the south of the Higgins Neuk Roundabout.

1.11 It is proposed that two-way traffic would be maintained on the temporary bridge during construction with the exception of limited periods of single lane working or full closure of the bridge for specific short-term duration activities. Traffic would be diverted onto the replacement piled viaduct on its completion. All temporary access measures provided to facilitate construction of the piled viaduct replacement structure would be removed on completion of construction. The concrete footings of the temporary bridge would be removed, and the piles cut off 1m below the ground level. The working platform and the access from the A876 would be removed. Ground levels would be reinstated where possible to allow the long-term natural re-establishment of saltmarsh habitat.

1.12 It is currently anticipated that construction will not commence before summer 2021 (subject to completion of statutory procedures) and the overall construction period is expected to have a duration of between 18 and 24 months. The Contractor is required to update and monitor the construction programme throughout the duration of the proposed scheme this should include reference to timings for discharging the mitigation measures. A copy of the construction programme should be included in the CEMP (Annex H).

Environmental Context and Constraints

1.13 The proposed scheme is located partially within the area between Mean High Water Springs (MHWS) and Mean Low Water Springs (MLWS), adjacent to the Firth of Forth.

1.14 The proposed scheme is also located partially within the following designated sites as shown on Figure 1.2 in Annex A of this Outline CEMP:

- Firth of Forth Special Protection Area (SPA);
- Firth of Forth Site of Special Scientific Interest (SSSI);
- Firth of Forth Ramsar site; and
- Pow Burn and Estuary Wildlife Site.

1.15 The Kincardine Bridge is designated a Category A Listed Building and is located at an historic crossing point of the River Forth. There are undesignated cultural heritage assets of known interest within 300m of the proposed scheme. A number of these are archaeological remains associated with the Kincardine Ship Graveyard and comprise the approximate locations of wooden hulks and vessels, revetments, and other marine remains on the Firth of Forth.

1.16 The Kincardine Bridge has segregated footways either side of the carriageway. The Right of Way CF97 passes through the proposed scheme extents to the south of the Higgins Neuk Roundabout. Core Path 010/100 (Higgins Neuk to Clackmannanshire Bridge) passes through the proposed scheme extents to the east of the Higgins Neuk Roundabout. At the northern end of the Kincardine Bridge, both footways connect into Core Path P746/06 (Old Kincardine Power Station loop) and National Cycle Network (NCN) Route 76, leading to the beginning of the Fife Coastal Path. NCN Route 76 crosses the A876 south-west of the Higgins Neuk Roundabout.

1.17 There are no residential, commercial or industrial properties located immediately adjacent to the proposed scheme. The closest residential properties are two dwellings located directly adjacent to the Higgins Neuk Roundabout approximately 40m from the proposed temporary site access from the north side, 110m north-west of the proposed temporary bridge structure and 150m north west of the existing piled viaduct. The nearest commercial and industrial properties are located within the town of Kincardine, which is situated across Kincardine Bridge, approximately 800m east of the proposed scheme. There are no community facilities within close proximity to the proposed scheme. Kincardine is the closest settlement to the proposed scheme and contains several community facilities including Tulliallan Primary School and Kincardine Library. The land immediately surrounding the proposed scheme comprises non-prime agricultural land that is not currently utilised as productive agricultural land.

1.18 The location of the proposed scheme in relation to the local area and key environmental constraints is shown on Figure 1.2 of the EIA Report as provided in Annex A (Key Environmental Constraints) of this Outline CEMP.

Project Objectives

1.19 The key objectives of the proposed scheme as reported in the EIA and Marine Licence are as follows:

- to minimise construction impacts on users of the road network;
- to minimise adverse impacts on environmental receptors, including the cultural heritage importance of the Kincardine Bridge; and
- to preserve the long-term use of the Kincardine Bridge.

1.20 The objectives align with the design strategy and objectives in DMRB GG 103 (Introduction and general requirements for sustainable development and design) and LD117 (Landscape design). As the contractor develops this CEMP in relation to construction impacts reference should be made to GG 103, LD 118 (Biodiversity design) and LD 117 as required.

2 Project Team Roles and Responsibilities

Roles and Organisations Involved in the Delivery of the CEMP

2.1 Transport Scotland will be responsible for overseeing management of the proposed scheme. Some of the site supervision roles involved in the delivery of the CEMP mitigation, such as the Ecological Clerk of Works (ECoW) who may supervise, monitor or check the Contractor's Environmental Method Statements, Management Plans and working methods, will be delegated where required by the Contractor.

2.2 The Contractor will be responsible for the construction phase of the proposed scheme including any subcontractors. They will be appointed in writing by Transport Scotland to plan, manage, monitor and coordinate health and safety during this phase. The Contractor would also be responsible for overseeing environmental management on site, updating this Outline CEMP once design and construction plans have been finalised, and handing the updated CEMP over to Transport Scotland for monitoring during operation, as appropriate. The Contractor will be required to delegate responsibilities to suitably experienced onsite personnel within the key areas of the site and these will be responsible for implementation, reporting and monitoring of environment mitigation during the contract period.

2.3 A summary of key personnel and a summary of their anticipated responsibilities are provided in Table 1. In addition, the delegation of responsibilities will be clearly identified within relevant project documents and site files. The Contractor is required to keep a record of competent expert statements including contact details and lines of escalation for personnel involved in the implementation, reporting and monitoring of the environmental mitigation required through this Outline CEMP, including the organisations described below in Table 1.

Table 1: Key Project Organisations and Associated Responsibilities

Organisation	Responsibility
Transport Scotland Project Manager	• Overseeing and monitoring the implementation of whole proposed scheme including the individual's responsibilities detailed below.
Environmental Clerk of Works / Environmental Specialists (as appointed by the Contractor)	• Delivering specific environmental mitigation as detailed in Table 3. • Monitoring the overall implementation of the CEMP. • Providing site inductions on environmental practices, conducting tool box talks, specialist surveys and overseeing monitoring activities as required. • Undertaking day to day monitoring and compliance checks. • Monitoring environmental compliance and good practice on site. • Monitoring implementation of the mitigation measures identified in Table 3 (e.g. implementation of Flood and Tidal Response Plan, etc.). • Maintaining and updating site specific method statements. • Overseeing the environmental components of the project. • Coordinating with specialists and liaising with the Local Authority and relevant stakeholders to agree working hours, discuss working methods and secure formal consents where required (see Table 4). • Auditing the Contractor's Site Environmental Management Plans and Programmes and ensuring compliance. • Monitoring compliance with the environmental requirements of the Contract, Works Information and the CEMP. • Reviewing and maintaining awareness of the requirements of key legislation, policies, and strategies prior to and during construction. • Manage and oversee other environmental specialists. • EnvCoW will include a specific Ecological Clerk of Works (ECoW) (see below) and any other specialists as required, e.g. an archaeologist.
Ecological Clerk of Works (ECoW) (as appointed by the Contractor)	• Prior to construction, the ECoW will ensure pre-construction surveys are undertaken and any advance mitigation measures required are implemented. • Ensuring the implementation of the Ecological Management Plan. • Monitoring compliance and requirement for removal of tracks and platforms. • Ensuring that no works will be undertaken on the saltmarsh outside the footprint of the working platform and access tracks, including the provision of drainage or water treatment facilities for construction runoff. • Ensuring compliance with Marine Scotland guidance on the protection of marine European Protected Species (Marine Scotland 2014) and JNCC guidance on minimising the risk of injury to marine mammals from piling noise (JNCC 2010). • Ensuring the contractor employs a 'soft-start' to all noisy activities to avoid sudden and unexpected disturbance. • Ensuring that any protected species licences required are obtained in respect of works necessary to construct the proposed scheme that are likely to breach applicable conservation legislation without a licence in place.
Ecologist (acting on behalf of Transport Scotland)	• Supervising the Contractor's ECoW to ensure compliance with specific mitigation (as detailed in Table 3). • To undertake bird monitoring surveys in response to construction activities throughout the construction period. • To submit a licence application to Scottish Natural Heritage (SNH)[1] to permit the destruction of the existing otter holt and monitor the replacement otter holt and compliance with any licence conditions.

[1] It should be noted that Scottish Natural Heritage (SNH) changed name to NatureScot as of 24 August 2020. However, in this Outline CEMP the organisation is referred to as SNH

Organisation	Responsibility
Community Liaison Officer (as appointed by the Contractor)	• Providing consultation and engagement with all relevant parties including site personnel, Transport Scotland, relevant local authorities; other statutory bodies and regulatory authorities, relevant community groups; and businesses and residents in local communities affected by the construction works. • Notify occupiers of nearby properties of the nature and anticipated duration of planned construction works that may affect them. • Establish a dedicated freephone telephone helpline together with a dedicated email address and postal address for enquiries and complaints during the construction phase. The relevant contact numbers, email and postal addresses will as a minimum be displayed on signs around the construction site and will be published on the project website. Enquiries and complaints will be logged by the Community Liaison Officer in a register and appropriate action will be taken in response to any complaints.

2.4 Further information on the key project roles and environmental responsibilities are detailed in the Record of Environmental Actions and Commitments (Table 3). These will be reviewed and agreed in subsequent stages. Individual names and contact details will be confirmed and the Outline CEMP updated where applicable by Transport Scotland and the Contractor prior to the commencement of construction.

3 Environmental Actions and Commitments

Record of Environmental Actions and Commitments

3.1 The Record of Environmental Actions and Commitments (REAC) (provided in Table 3) identifies the environmental commitments made during the design stage to address the potential environmental effects of the proposed scheme. The environmental commitments, including the assumptions and reasoning for which the actions are based and the relevant legislation which governs them, are provided in the technical chapters of the EIA Report. Table 2 provides the EIA Report chapter numbers which relate to the mitigation item codes used in the REAC.

Table 2: Mitigation Item References

Chapter Number	Chapter Title	Mitigation Item Reference
4	Overview of Assessment Process (standard mitigation)	SM e.g. SM1
6	Geology, Soils and Groundwater	G e.g. G1
7	Road Drainage and the Water Environment	WE e.g. WE1
8	Marine Ecology	ME e.g. ME1
9	Terrestrial Ecology	TE e.g. TE1
10	Cultural Heritage	CH e.g. CH1
11	Air Quality	AQ e.g. AQ1
12	Noise and Vibration	NV e.g. NV1
13	Material Assets and Waste	M&W e.g. M&W1
15	Climate	CC e.g. CC1

3.2 Chapter 17 (Schedule of Environmental Commitments) of the EIA Report collates the environmental mitigation from the technical chapters as well as standard mitigation and mitigation for environmental topic areas which were scoped out of the assessment.

3.3 The REAC will be updated as the project progresses and will be finalised at the end of construction upon completion of the proposed scheme. Post construction, the CEMP will be provided to Transport Scotland for the future maintenance and operation of Kincardine Bridge.

3.4 The REAC states at which stage of the project the environmental mitigation commitment is aligned to. For clarity, pre-construction works include advance works (including service diversions and some environmental mitigation) and site mobilisation (i.e. the establishment of construction site). It is anticipated that construction would not commence before Summer 2021 (subject to completion of statutory procedures) and the overall construction period is expected to be between 18 and 24 months. The Contractor is responsible for monitoring and managing change, e.g. a change in programme and associated seasonal restrictions, and should update Annex E (Copy of Evaluation of Change Register) as appropriate.

3.5 The REAC requires the Contractor to produce and develop multiple Environmental Management Plans and Method Statements. These will be produced pre-construction and updated and refined through construction as appropriate. Annex B (Relevant Management Plans) and Annex C (Environmental Method Statements) have been provided as placeholders for the Contractor to populate and they list the management plans and method statements that are required as mitigation through the REAC.

3.6 The Contractor is required to monitor the achievement of environmental mitigation and should develop achievement criteria as well as utilising the Completion Record column of the REAC. Risks associated with non-compliance of the environmental commitments outlined in the REAC will be managed by the Contractor and recorded in the Risk Register (refer to Annex G).

Table 3: Record of Environmental Actions and Commitments

Mitigation Item/Source	Location of measure	Timing of Measure	Mitigation Purpose/Objective including legislative requirements if applicable	Environmental Actions/Commitments	Responsible Party for Overseeing Implementation	Specific Consultation or Approval Required	Monitoring / Compliance	Completion Record[2]
Standard Mitigation (EIA Report)								
SM1	n/a	Pre-construction and Construction	To provide a framework for the implementation of construction activities in accordance with the environmental commitments and mitigation measures in the EIA report.	A Construction Environment Management Plan (CEMP) will be developed in accordance with DMRB LA 120 'Environmental management plans' by the Contractor to provide a framework for the implementation of construction activities, setting out how the Contractor intends to operate the construction site, including construction related mitigation measures identified throughout Table 3. The relevant sections of the CEMP will be in place prior to the start of construction work and the CEMP will continue to be developed throughout the construction process to avoid, reduce or mitigate construction impacts on the environment and the surrounding community. The CEMP will include but not be limited to, subsidiary plans relation to: geology and land contamination, surface water and groundwater (including a Flood and Tidal Response Plan); ecology (Ecological Management Plan which will include specific Species Protection Plans and a Saltmarsh Management Plan), cultural heritage, air quality (e.g. dust), noise and vibration, and landscape (Site Restoration Plan).	Contractor	Consultation with the relevant local authorities, other statutory bodies and regulatory authorities.	Employer's Requirements in the Contract.	Details of Individual responsible: Initial: Date:
SM2	n/a	Pre-construction and Construction	To monitor the implementation of mitigation measures identified and ensure that activities are carried out in such a manner to prevent or reduce impacts on the environment.	Prior to construction, a team of suitably qualified Environmental Clerk of Works (EnvCoW) (i.e. professionally qualified in a relevant environmental discipline) will be appointed by the Contractor. The EnvCoW(s) will be present on site, as required, during the construction period to monitor the implementation of the mitigation measures identified and ensure that activities are carried out in such a manner to prevent or reduce impacts on the environment.	Contractor	Approval by Transport Scotland.	Employer's Requirements in the Contract.	Details of Individual responsible: Initial: Date:
SM3	n/a	Pre-construction and Construction	To ensure that consultees and members if the public are kept informed on the progress of the proposed scheme and to efficiently address any queries or concerns raised.	Throughout the construction period the Contractor will, as required, contribute towards the overall communications strategy for the proposed scheme to ensure that consultees and members of the public are kept informed on the progress of the proposed scheme and to efficiently address any queries or concerns raised. As part of this the Contractor will appoint a Community Liaison Officer who will: • Liaise with the relevant local authorities; other statutory bodies and regulatory authorities; relevant community groups; and businesses and residents in local communities affected by the construction works; • Notify occupiers of nearby properties of the nature and anticipated duration of planned construction works that may affect them; • Support the production of project communications; • Establish a dedicated freephone telephone helpline together with a dedicated email address and postal address for enquiries and complaints during the construction phase. The relevant contact numbers, email and postal addresses will as a minimum be displayed on signs around the construction site and will be published on the project website. Enquiries and complaints will be logged in a register and appropriate action will be taken in response to any complaints.	Contractor	Approval by Transport Scotland.	Employer's Requirements in the Contract.	Details of Individual responsible: Initial: Date:
SM4	n/a	Pre-construction and Construction	To ensure site workers are aware of best practice construction methods, mitigation measures and how they are implemented.	The Contractor will ensure that all site workers receive adequate training relevant to their role prior to working on the construction site, including specific environmental project inductions and 'toolbox talks' as required.	Contractor	None required.	Employer's Requirements in the Contract.	Details of Individual responsible: Initial: Date:

[2] The Contractor is required to monitor the achievement of environmental mitigation and should develop achievement criteria for the measures and utilising the Completion Record column of the REAC Table to record discharging of all mitigation.

Mitigation Item/Source	Location of measure	Timing of Measure	Mitigation Purpose/Objective including legislative requirements if applicable	Environmental Actions/Commitments	Responsible Party for Overseeing Implementation	Specific Consultation or Approval Required	Monitoring / Compliance	Completion Record[2]
SM5	n/a	Pre-construction	To ensure the Contractor's design is implemented in compliance with the Roads EIA Regulations.	Design changes will be subject to environmental review to ensure that: • there are no new residual significant adverse effects; and/or • the significance levels of residual significant effects are not greater than those reported in this EIA Report. If environmental review found that any future changes to the design resulted in either of the above, an addendum to the EIA Report, or a new EIA Report, would need to be published for public consultation and comment in order to comply with the Roads EIA Regulations. As these Regulations require the consideration and reporting of significant effects prior to consent decisions from the Scottish Ministers.	Contractor	Approval by Transport Scotland.	Employer's Requirements in the Contract.	Details of Individual responsible: Initial: Date:
SM6	Throughout scheme/LMA	Construction	To ensure that the construction of the proposed scheme is undertaken within the land made available (LMA) to the Contractor.	Construction work would take place within the limit of the LMA to the appointed Contractor as defined within the contract documents. The appointed Contractor may wish to utilise other areas of land outwith the LMA. In such an instance, the appointed Contractor would have to secure the use of these areas by agreement and through separate planning applications or other consents, where appropriate.	Contractor	Landowner and relevant stakeholder approval (if required).	Employer's Requirements in the Contract.	Details of Individual responsible: Initial: Date:
Geology, Soils and Groundwater Mitigation (EIA Report)								
G1	n/a	Construction	To comply with the Falkirk Council's Local Development Plan 2 (LDP2) Place and Environment Policy PE25 (Soils and Agricultural Land) (Falkirk Council 2020) and reduce impacts on rare soils of potential national interest.	The Contractor shall develop a Soil Management Plan prior to construction, for implementation during construction, with cognisance of the requirements identified in relation to organic rich/peaty saltings under Falkirk Council's Local Development Plan 2 (LDP2) Place and Environment Policy PE25 (Soils and Agricultural Land) (Falkirk Council 2020), the 'Scottish Soil Framework' (Scottish Government 2009) and other voluntary or industry regulated Codes of Practice, including 'Promoting the Sustainable Reuse of Greenfield Soils in Construction' (SEPA 2010), the 'Construction Code of Practice for the Sustainable Use of Soils on Construction Sites' (Defra 2009). This shall include consideration of the selection of appropriate construction methodologies to limit the areas and volume of saltings to be disturbed and/or excavated to a minimum during construction to limit the impact upon the deposits. In addition, whilst not directly relevant to saltings, guidance provided in the publication 'Development on Peatland: Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and the Minimisation of Waste' (Scottish Renewables and SEPA 2012) shall be adopted where appropriate.	Contractor	Consultation with Falkirk Council and SEPA	Ongoing monitoring of compliance throughout works via implementation of Management Plans as specified in Employer's Requirements in the Contract documents.	Details of Individual responsible: Initial: Date:
G2	Sources of contamination requiring remediation	Construction	To reduce impacts from contaminated land sources. To comply with Part IIA of the Environmental Protection Act 1990 and The Contaminated Land (Scotland) Regulations 2005.	Consultation has been undertaken with the relevant local authorities and SEPA (as necessary) regarding works in relation to land affected by contamination to support the obligations set out in 'Planning Advice Note 33: Development of Contaminated Land' (Scottish Government 2000) if and where relevant. No remediation requirement has been identified, however should unforeseen contamination be identified during construction, any remedial action will be carried out under the appropriate remediation licencing.	Transport Scotland and Contractor	Consultation with Falkirk Council and SEPA as required.	Consultation requirements to be included as a contract requirement as necessary.	Details of Individual responsible: Initial: Date:

Mitigation Item/Source	Location of measure	Timing of Measure	Mitigation Purpose/Objective including legislative requirements if applicable	Environmental Actions/Commitments	Responsible Party for Overseeing Implementation	Specific Consultation or Approval Required	Monitoring / Compliance	Completion Record[2]
G3	n/a	Pre-construction and Construction	To ensure appropriate health and safety and waste management procedures for working with potentially contaminated soils are followed. To comply with Health and Safety at Work etc. Act 1974, The Construction (Design and Management) Regulations 2015, The Control of Asbestos Regulations 2012 and The Waste Management Licensing (Scotland) Regulations 2011 (as amended by the Waste Management Licensing (Scotland) Amendment Regulations 2016).	Prior to construction, appropriate health and safety and waste management procedures for working with potentially contaminated soils (including asbestos) and water will be established. In respect of potential risks to construction workers associated with the presence of asbestos fibres and dust, it is recommended that the Contractor should produce the necessary risk assessments for construction within potentially asbestos contaminated ground, and develop appropriate method statements and procedures to manage the potential risks in line with CL:AIRE publication 'Interpretation for Managing and Working with Asbestos in Soil and Construction and Demolition Materials' (CL:AIRE 2016). Waste management procedures will take account of inter alia Waste Management Licence (Scotland) Regulations 2011 (as amended by the Waste Management Licensing (Scotland) Amendment Regulations 2016) and the HSE Approved Code of Practice for managing and working with asbestos (L143) (HSE 2013). These procedures will be implemented as appropriate during construction.	Contractor	None required	Employer's Regulations and/or specification.	Details of Individual responsible: Initial: Date:
G4	n/a	Construction and Post-construction / Operation	To reduce impacts from contaminated land sources and confirm the safety of construction and maintenance staff. To comply with Part IIA of the Environmental Protection Act 1990, The Contaminated Land (Scotland) Regulations 2005, Health and Safety at Work etc. Act 1974 and Construction (Design and Management) Regulations 2015.	Risks to construction, demolition and maintenance staff working with/near contaminated land will be mitigated by the implementation of the above in combination with the adoption of appropriate systems of work, including personal protective equipment (PPE) as a last resort. In the event that unrecorded contamination is encountered, works should be stopped and the working procedures reassessed to confirm the working methods remain appropriate. An appropriate response procedure should be developed in the event that unexpected asbestos contamination is identified during construction works in accordance with requirements of the Control of Asbestos Regulations (CL:AIRE 2016) and the HSE Approved Code of Practice for managing and working with asbestos (L143) (HSE 2013).	Contractor	None required	Employer's Regulations and/or specification.	Details of Individual responsible: Initial: Date:
G5	Throughout scheme/LMA	Construction	To identify potential presence of previously unidentified contamination. To comply with Part IIA of the Environmental Protection Act 1990, The Contaminated Land (Scotland) Regulations 2005, Health and Safety at Work etc. Act 1974 and Construction (Design and Management) Regulations 2015.	A watching brief to be implemented to identify potential presence of previously unidentified contamination. Personnel appointed by the Contractor to be appropriately trained if involved in earthworks activities.	Contractor	None required	Employer's Regulations and/or specification.	Details of Individual responsible: Initial: Date:
G6	Locations where piling is required	Construction	To prevent cross contamination and pollution from piling works undertaken in areas of land affected by contamination. To comply with Part IIA of the Environmental Protection Act 1990 and The Contaminated Land (Scotland) Regulations 2005.	To prevent cross contamination and pollution from piling works undertaken in areas of land affected by contamination, the Contractor will develop a Piling Risk Assessment and adhere to appropriate guidance including the 'Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention, National Groundwater and Contaminated Land Centre Report NC/99/77'	Contractor	None required	Employer's Regulations and/or specification.	Details of Individual responsible: Initial: Date:

Mitigation Item/Source	Location of measure	Timing of Measure	Mitigation Purpose/Objective including legislative requirements if applicable	Environmental Actions/Commitments	Responsible Party for Overseeing Implementation	Specific Consultation or Approval Required	Monitoring / Compliance	Completion Record[2]
G7	n/a	Pre-construction and Construction	To identify any potential risks posed to human health and the water environment. In addition, this mitigation item would maximise re-use of site-won materials on-site and minimise the need for disposal of waste in line with the principles of the "Waste Hierarchy" through re-use of excavation arisings (refer to **Mitigation Item M&W3**) To comply with Part IIA of the Environmental Protection Act 1990, The Contaminated Land (Scotland) Regulations 2005 and The Waste Management Licensing (Scotland) Regulations 2011 (as amended by the Waste Management Licensing (Scotland) Amendment Regulations 2016).	To maximise the reuse of site-won materials on-site (and minimise the need for disposal of waste in line with the principles of the "Waste Hierarchy") whilst ensuring that no risks are posed to human health nor the water environment, a soil reuse assessment will be undertaken prior to construction. The soil reuse assessment will identify any potential risks posed to both human health and the water environment from potentially contaminated soils reused throughout the scheme.	Contractor	None required	Employer's Regulations and/or specification.	Details of Individual responsible: Initial: Date:
G8	n/a	Construction	To determine whether disposed soils are hazardous or non-hazardous. To comply with The Waste Management Licensing (Scotland) Regulations 2011 (as amended by the Waste Management Licensing (Scotland) Amendment Regulations 2016).	If excavated soils are deemed unsuitable or not required for onsite reuse they should be initially considered for offsite reuse or recycling (in accordance with Waste Management Licensing requirements). If destined for offsite disposal they will be assessed in line with the 'Waste Classification: Guidance on the Classification and Assessment of Waste' (Technical Guidance WM3) (Natural Resources Wales, SEPA, Northern Ireland Environment Agency, Environment Agency 2015) prior to disposal to determine whether they are hazardous or non-hazardous. This will establish the most appropriate and cost-effective waste stream for the waste materials	Contractor	None required	Employer's Regulations and/or specification.	Details of Individual responsible: Initial: Date:
G9	Areas with ground gas	Pre-construction and Construction	To mitigate against potential impacts on human health due to ground gas. Compliance with Health and Safety at Work etc. Act 1974, Construction (Design and Management) Regulations 2015 and The Dangerous Substances and Explosive Atmospheres Regulations 2002.	Given the presence of made ground, organic rich/peaty saltings and underlying coal seams there is potential for the localised generation of methane and/or carbon dioxide which may warrant further consideration should below ground or confined space working be required. Appropriate working methods cognisant of potential ground gas risks will be required to be developed and adopted by the Contractor during below ground site construction works including excavations and piling. It is recommended that this should include as a minimum, gas monitoring undertaken prior to any entry into excavations, confined spaces or below ground structures and use of personal gas monitors and personal protective equipment (PPE) (including respiratory protective equipment (RPE)) as a last resort. The implications of encountering pockets of ground gas should also be considered during piling risk assessments for the proposed scheme.	Contractor	None required	Employer's Regulations and/or specification.	Details of Individual responsible: Initial: Date:
G10	Throughout scheme/LMA	Pre-construction and Construction	Compliance with The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR) (Scottish Government 2013) licensing to protect the water environment.	The potential volume of groundwater drainage would be considered in the context of potential groundwater abstraction CAR licences prior to works commencing. This would be done using all available Ground Investigation (GI) data.	Contractor	Approval required from SEPA	None expected once approval granted.	Details of Individual responsible: Initial: Date:
G11	Throughout scheme/LMA	Construction	To ensure that no polluted water percolates into the ground or contaminated runoff is generated. To comply with Part IIA of the Environmental Protection Act 1990 and The Contaminated Land (Scotland) Regulations 2005.	Storage of excavated soils and made ground will be minimised on site (spatially and in duration) and all storage areas will be appropriately lined, with adequate drainage management in place. This is to ensure that no polluted water percolates into the ground or contaminated run-off is generated.	Contractor	None required	Ongoing monitoring of compliance throughout works and ensuring site is restored upon completion via contract requirements.	Details of Individual responsible: Initial: Date:

Mitigation Item/Source	Location of measure	Timing of Measure	Mitigation Purpose/Objective including legislative requirements if applicable	Environmental Actions/Commitments	Responsible Party for Overseeing Implementation	Specific Consultation or Approval Required	Monitoring / Compliance	Completion Record[2]
Road Drainage and the Water Environment Mitigation (EIA Report)								
W1	Within the intertidal zone and 10% AEP flood extent of LMA	Pre-Construction and Construction	Prevent flood incidents during construction	To mitigate the potential significant effects from flood risk during construction, a Flood and Tidal Response Plan will be developed by the Contractor which will include: • Detail on expected tidal levels, nature and timings during the construction phase; • Inundation protection of construction activities located within the intertidal zone and 10% Annual Exceedance Probability (AEP) (10-year) flood extent (where appropriate). Inundation protection for temporary works should be provided up to the 10% AEP (10-year) flood level in line with CIRIA C648 (CIRIA 2006); • Use of Met Office construction specific forecasting services and SEPA's Floodline Scotland to predict adverse weather and tidal conditions; • Systems and protocols to follow in the event of adverse weather and tidal conditions including evacuation plans; • Programming and phasing of works to reflect the intertidal conditions and time when land-based plant will likely be unavailable for work; and • Erosion protection measures for temporary works and structures located within the intertidal zone and 10% AEP flood extent (where appropriate).	Contractor	Plans will be linked to Environmental Management Plan (EMP) and Construction Site Licence (CSL) (if required) so will need approval by SEPA.	Duties and responsibilities of hired EnvCoW may include monitoring implementation of Flood and Tidal Response Plan.	Details of Individual responsible: Initial: Date:
W2	n/a	Pre-construction and Construction	Good practical guidance followed during design, construction and post-construction	Compliance with the conditions of the Marine licence, CSL (if required) and any CAR authorisation (if required).	Contractor	CAR Licence approval for new or changes to existing engineering structures by SEPA (if required)	Site visits from SEPA staff will likely check compliance.	Details of Individual responsible: Initial: Date:
W3	n/a	Pre-construction and Construction	Prevent pollution incidents during construction	To mitigate the potentially significant effects on water quality during the construction phase, a Pollution Prevention Plan (PPP) will be developed by the Contractor, which will include: • A Pollution Incident Response Plan for all on-site activities including specific measures for intertidal works and spillage response procedures. • Spillage kits to be stored at key locations on site and an appropriate temporary boom (such as a shore sealing boom) to be implemented in the case of a pollution event. • Minimisation of disturbance of potentially contaminated estuarine sediments, for example through the use of floating track and minimising the extent of temporary work areas. • Isolation of any works in the intertidal zone that are intended to continue to operate during high tide, likely using a raised platform. • Details of appropriate collection of water within excavations or isolated work areas and delivery to treatment facilities as per **Mitigation Item W4**. • Rehabilitation of disturbed ground in line with the Saltmarsh Management Plan (described in **Mitigation Item W12**) as soon as possible after the work has been completed to reduce the risk of erosion and mobilisation of contaminants. • Plans showing the storage of fuels, chemicals, oils, concrete washes, water storage and treatment systems and any other potentially polluting materials outside of the intertidal zone and 10% AEP flood extent. • Plans showing the storage of fuels, chemicals, oils, concrete washes, water storage and treatment systems and any other potentially polluting materials at least 10m from any drainage channel, saltmarsh creek or intertidal area, where practicable.	Contractor	PPP proposals will be linked to EMP and CSL (if required) so will need approval by SEPA	Requirement for EnvCoW supervision will be included as an Employer's Requirement in Contract.	Details of Individual responsible: Initial: Date:

Mitigation Item/Source	Location of measure	Timing of Measure	Mitigation Purpose/Objective including legislative requirements if applicable	Environmental Actions/Commitments	Responsible Party for Overseeing Implementation	Specific Consultation or Approval Required	Monitoring / Compliance	Completion Record[2]
W4	n/a	Pre-construction and Construction	Prevent pollution incidents during construction	A detailed site run-off construction drainage design should be developed by the Contractor. This should comprise a closed-loop system, to ensure run-off or spillages do not enter the inter-tidal habitat surrounding the site, and should pump any collected water within excavations or isolated works to appropriate treatment facilities (likely comprising a proprietary treatment system and dosing system and supporting header tanks to store excess capacity). Water discharged from treatment facilities must be of an acceptable quality, in line with General Binding Rule (GBR) 10 of The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR) and should the Contractor propose to discharge to the Firth of Forth SEPA must be satisfied that an appropriate discharge quality has been achieved.	Contractor	Proposals will be linked to PPP, EMP and CSL (if required) so will need approval by SEPA.	Duties and responsibilities of hired Environmental Clerk of Works (EnvCoW) may include monitoring of CAR licence compliance.	Details of Individual responsible: Initial: Date:
W5	Throughout scheme/LMA	Pre-construction and Construction	To protect the water environment and ecology.	Adherence to SEPA's Guidance for Pollution Prevention (GPPs) and CIRIA's Coastal and Marine Environmental Site Guide (C744) and Environmental good practice on site guide (C741). Appropriate measures will include, but may not be limited to: • avoiding unnecessary stockpiling of materials and exposure of bare surfaces; • use of an appropriate grade of material on temporary surfaces that will be clean and will be durable under heavy trafficking; • maintenance and regrading of temporary surfaces where issues are encountered with the breakdown of the existing surface and generation of fine sediment; and • provision of wheel washes at appropriate locations (in terms of proposed construction activities) and >10m from water features where practicable.”;	Contractor	None required	Site visits from SEPA staff will likely check compliance.	Details of Individual responsible: Initial: Date:
W6	Throughout scheme/LMA	Pre-construction and Construction	Prevent sediment laden runoff discharging from site	Installation of temporary treatment facilities to protect water quality and promote flow attenuation during construction following CIRIA's guidance including C648 (CIRIA 2006) and C744 (CIRIA 2015b) and compliance with GBR 10 of The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR).	Contractor	None required	Requirement for EnvCoW supervision will be included as an Employer's Requirement in Contract.	Details of Individual responsible: Initial: Date:
W7	n/a	Pre-construction and Construction	To provide a framework for the implementation of construction activities in accordance with the environmental commitments and mitigation measures in the EIA Report. It will be developed and evolve to avoid, reduce or mitigate construction impacts on the environment and the surrounding community.	Preparation of a Construction Environmental Management Plan (CEMP) prior to commencement of works.	Contractor	None required	Duties and responsibilities of hired EnvCoW may include monitoring implementation of PPP.	Details of Individual responsible: Initial: Date:
W8	All storage areas	Pre-construction and Construction	To reduce impacts on the water environment in relation to oil/fuel leaks and spillages.	Compliance of any chemicals, fuel and oil storage requirements under The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR) and SEPA PPG02, including a secondary containment system providing a capacity of at least 110% of the volume of the tank. Storage of excavated soils and made ground should be minimised and all storage areas appropriately lined, in line with **Mitigation Item G11** within Chapter 6 (Geology, Soils and Groundwater).	Contractor	None required	Site visits from SEPA staff will likely check compliance.	Details of Individual responsible: Initial: Date:
W9	n/a	Pre-construction and Construction	To monitor the implementation of the mitigation measures identified and ensure that activities are carried out in such a manner to prevent or reduce impacts on the environment.	A suitably qualified and experienced EnvCow shall be appointed by the Contractor to oversee the implementation of mitigation and monitoring of water environment.	Contractor	Approval by Transport Scotland	Requirement for EnvCoW supervision will be included as an Employer's Requirement in Contract.	Details of Individual responsible: Initial: Date:

Mitigation Item/Source	Location of measure	Timing of Measure	Mitigation Purpose/Objective including legislative requirements if applicable	Environmental Actions/Commitments	Responsible Party for Overseeing Implementation	Specific Consultation or Approval Required	Monitoring / Compliance	Completion Record[2]
W10	n/a	Pre-construction, Construction and Post-construction phases	To ensure no significant effects on the water environment arise.	Any further refinement of the permanent piled viaduct replacement structure design will be undertaken in accordance with environmental good practice guidance (CIRIA 2015b) and will receive input from the appropriate environmental specialists to ensure no significant effects on the water environment will occur during the operational phase.	Contractor	Consultation with SEPA and Marine Scotland	Duties and responsibilities of hired EnvCoW may include monitoring of water quality of discharge.	Details of Individual responsible: Initial: Date:
W11	Saltmarsh	Construction	To limit the extend of impacts to saltmarsh creeks	The working area located on saltmarsh should be minimised as far as practicable.	Contractor	None required.	Requirement for EnvCoW supervision will be included as an Employer's Requirement in Contract.	Details of Individual responsible: Initial: Date:
W12	n/a	Pre-construction, Construction and Post-construction phases	To mitigate the potential impacts on estuarine geomorphology during the construction and operational phase	Prior to construction, the Contractor will develop a Saltmarsh Management Plan, outlined in Chapter 8 (Marine Ecology) **Mitigation Item ME6**. This should include the following measures to mitigate potential impacts on estuarine geomorphology during the construction and operational phase: • Methodology for restoration of saltmarsh geomorphological features (including creeks) post-construction. • Pre and post construction monitoring of saltmarsh habitat, by a suitably qualified Environmental Clerk of Works (EnvCoW), to include photographic record of existing creeks, habitat types and extent, species diversity and scour assessments around new or removed structures. • Measures to minimise future scour and erosion and promote recovery of saltmarsh vegetation.	Contractor	Consultation with Scottish Natural Heritage (SNH)	Duties and responsibilities of hired EnvCoW may include monitoring implementation of good practice guidance.	Details of Individual responsible: Initial: Date:
Marine Ecology Mitigation (EIA Report)								
ME1	n/a	Pre-construction & Construction	To provide a framework for the implementation of construction activities in accordance with the environmental commitments and mitigation measures relating to the aquatic environment.	Prior to construction the Contractor will develop a Construction Environmental Management Plan (CEMP), including an Ecological Management Plan, which will detail the mitigation to be implemented and how this will be monitored.	Contractor	Consultation with SNH	CEMP requirement will be included as an Employer's Requirement in Contract.	Details of Individual responsible: Initial: Date:

Mitigation Item/Source	Location of measure	Timing of Measure	Mitigation Purpose/Objective including legislative requirements if applicable	Environmental Actions/Commitments	Responsible Party for Overseeing Implementation	Specific Consultation or Approval Required	Monitoring / Compliance	Completion Record[2]
ME2	n/a	Pre-construction & Construction	To ensure that the mitigation strategies required for safeguarding protected species and habitat are implemented.	Prior to construction a suitably qualified Ecological Clerk of Works (ECoW) will be appointed by the Contractor and will be responsible for implementation of the Ecological Management Plan. The ECoW will: • provide ecological advice over the entire construction programme; • in collaboration with the ecologist acting on behalf of Transport Scotland, undertake or oversee pre-construction surveys for protected species in the areas affected by the proposed scheme; • ensure mitigation measures are implemented to avoid and reduce impacts on ecological features; and • monitor the implementation of the mitigation measures during the construction phase to ensure compliance with protected species legislation and commitments within the EIA Report. The ECoW will be a member of CIEEM and will have previous experience in similar ECoW roles. All ECoWs will be approved by Transport Scotland to be appropriately qualified for the role and compliance will be monitored by an ecologist acting on behalf of Transport Scotland. The ECoW will be appointed in advance of the main construction programme commencing to ensure pre-construction surveys are undertaken and any advance mitigation measures required are implemented, in collaboration with the ecologist acting on behalf of Transport Scotland.	Contractor	ECoW approved by Transport Scotland	Ecologist acting on behalf of Transport Scotland will monitor the Contractor's ECoW to ensure compliance with mitigation. Requirement for ECoW supervision will be included as an Employer's Requirement in Contract.	Details of Individual responsible: Initial: Date:
ME3	Throughout scheme/LMA	Construction	To avoid pollution being discharged into the marine environment and impacting on protected species and habitats to comply with The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) CAR).	Best practice construction methods (CIRIA 2015a) will be used including the use of appropriate pollution controls (i.e. Guidance for Pollution Prevention (GPPs)), such as construction drainage, a strict re-fuelling protocol and removal of all loose materials from the intertidal area.	Contractor	None required	N/A	Details of Individual responsible: Initial: Date:
ME4	Throughout scheme/LMA	Construction	To minimise damage to habitat and disturbance of aquatic and marine species.	The footprint of the working area will be minimised as far as possible and vehicles, plant and personnel will be constrained to this area through the use of temporary barriers to minimise the damage to habitats and potential direct mortality and disturbance to animals located within and adjacent to this footprint. The access track and working platforms on the saltmarsh will be created through use of geotextile layer under aggregate material.	Contractor	None required	N/A	Details of Individual responsible: Initial: Date:
ME5	Saltmarsh	Post-construction	To minimise damage to habitat and disturbance of aquatic and marine species.	On completion of the works all access tracks and working platforms will be removed in their entirety from the saltmarsh.	Contractor	None required	Contractor's ECoW to monitor compliance and requirement for removal of tracks and platforms will be included as an Employer's Requirement in the Contract.	Details of Individual responsible: Initial: Date:
ME6	n/a	Pre-construction,	To monitor potential impacts and encourage recovery of the saltmarsh.	Prior to construction the Contractor will develop a Saltmarsh Management Plan. This will include measures to reduce damage and encourage recovery of the saltmarsh and will include a period of post-construction monitoring.	Contractor	Consultation with SNH	Monitoring required during and post-construction to ensure efficacy of the Saltmarsh Management Plan. Development of the Saltmarsh Management Plan will be included as an Employer's Requirement in the Contract.	Details of Individual responsible: Initial: Date:

Mitigation Item/Source	Location of measure	Timing of Measure	Mitigation Purpose/Objective including legislative requirements if applicable	Environmental Actions/Commitments	Responsible Party for Overseeing Implementation	Specific Consultation or Approval Required	Monitoring / Compliance	Completion Record[2]
ME7	Saltmarsh	Construction & Post- construction	To minimise damage to habitat and disturbance of aquatic and marine species.	With the exception of temporarily realigning the existing SuDS outfall, no works will be undertaken on the saltmarsh outside the footprint of the working platform and access tracks. This includes provision of drainage or water treatment facilities for construction runoff.	Contractor	None required	This mitigation item will be detailed in the CEMP.	Details of Individual responsible: Initial: Date:
ME8	At piling locations	Construction	To minimise disturbance or potential for injury of cetaceans.	The Contractor will take cognisance of Marine Scotland guidance on the protection of marine European Protected Species (Marine Scotland 2014) and JNCC guidance on minimising the risk of injury to marine mammals from piling noise (JNCC 2010).	Contractor	None required	Contractor's ECoW to monitor compliance	Details of Individual responsible: Initial: Date:
TE3	Throughout scheme/LMA	Construction	To avoid sudden and unexpected disturbance to ecological receptors.	The Contractor will employ a 'soft-start' to all noisy activities to avoid sudden and unexpected disturbance. Each time the activity is started up after a period of inactivity, the noise levels will be gradually increased over a period of 30 minutes to allow birds (and other animals) to relocate. This will apply year-round.	Contractor	None required	This mitigation item will be detailed in the CEMP. Contractor's ECoW to monitor compliance	Details of Individual responsible: Initial: Date:
TE12	n/a	Construction	To comply with conservation legislation e.g. the Conservation (Natural habitats &c.) Regulations 1994 (as amended in Scotland). .	Licences in respect of works necessary to construct the proposed scheme that are likely to breach applicable conservation legislation will be obtained. The Contractor will comply with the requirements or conditions of any granted licence. Licensing may be for the UK and/or European Protected Species.	Contractor	Approval from SNH and Marine Scotland	This mitigation item will be detailed in the CEMP.	Details of Individual responsible: Initial: Date:
Terrestrial Ecology Mitigation (EIA Report)								
TE1	n/a	Pre-construction & Construction	To protect sensitive bird and mammal habitats from illumination.	A construction lighting plan and method statement will be developed by the Contractor. The plan will detail specific mitigation requirements, including but not limited to measures to avoid light spill/reflections, and avoidance of white-blue spectrum and high UV emitting lighting. The lighting plan will take into account published guidance on lighting (e.g. Institution of Lighting Professionals (2011), The Royal Commission on Environmental Pollution (2009) and Bat Conservation Trust and Institution of Lighting Professionals (2018)). The construction lighting design will be developed specifically to avoid illuminating sensitive habitats in locations such as sensitive bird habitats adjacent to the bridge, particularly to the southeast of the piers; watercourses; known commuting routes, and where there is known activity of protected species identified through pre-construction ecological surveys (**Mitigation Item ME1**). Where this is not possible the Contractor will agree any exceptions with the Ecological Clerk of Works (ECoW).	Contractor	N/A	The requirement for a construction lighting plan and method statement will be included as an Employer's Requirement in the Contract. The Contractor's ECoW will monitor compliance.	Details of Individual responsible: Initial: Date:

Mitigation Item/Source	Location of measure	Timing of Measure	Mitigation Purpose/Objective including legislative requirements if applicable	Environmental Actions/Commitments	Responsible Party for Overseeing Implementation	Specific Consultation or Approval Required	Monitoring / Compliance	Completion Record[2]
TE2	Throughout scheme/LMA	Pre-construction & Construction	To avoid significant impacts on qualifying species of the SPA, Ramsar and SSSI, as well as other species of birds present, as a result of the proposed scheme. Compliance required under The Conservation (Natural Habitats, & c.) Regulations 1994 (as amended), The Wildlife and Countryside Act 1981 (as amended), and The Birds Directive (79/409/EEC).	Monitoring of bird responses to construction activities will be undertaken. Surveys will follow an adapted methodology based on the wetland bird Through The Tide Count (TTTC) surveys (Table 9.1 in Chapter 9: Terrestrial Ecology) and will be undertaken by an ecologist acting on behalf of Transport Scotland throughout the construction period. If required, further mitigation will be proposed and discussed with the Ecological Clerk of Works (ECoW) and Scottish Natural Heritage (SNH). Screening of at least 2m in height (such as Heras Readyhoard or Steelhoard Screening fences (Heras 2020)) will be provided between the works and the coastal area throughout winter. Where possible, and as agreed by the ECoW, screens will be positioned around working areas, including ancillary works/plant such as water treatment tanks, to reduce the visual disturbance caused by operatives, plant and vehicles within the working area. Screens will be in place to mitigate against visual disturbance from the works primarily, but also provide some sound attenuation to limit noise disturbance. The screening should be checked by the ECoW prior to works to ensure that the screening has been appropriately placed. The Construction Environmental Management Plan (CEMP) will include a Species Management Plan for wetland birds which will provide further detail on mitigation and monitoring for these species.	Designer/Contractor	N/A	Ecologist (acting on behalf of Transport Scotland) to undertake monitoring surveys. The requirement for screening and CEMP (including species management plans) will be included as an Employer's Requirement in Contract. The Contractor's ECoW will monitor compliance during construction.	Details of Individual responsible: Initial: Date:
TE3	Throughout scheme/LMA	Construction	To avoid sudden and unexpected disturbance to ecological features.	The Contractor will employ a 'soft-start' to all noisy activities to avoid sudden and unexpected disturbance. Each time the activity is started up after a period of inactivity, the noise levels will be gradually increased over a period of 30 minutes to allow birds (and other animals) to relocate. This will apply year-round.	Contractor	N/A	This mitigation item will be detailed in the CEMP. The Contractor's ECoW will monitor compliance.	Details of Individual responsible: Initial: Date:
TE4	Throughout scheme/LMA	Construction	To reduce disturbance to protected species and comply with the Wildlife and Countryside Act 1981 (as amended) and The Conservation (Natural Habitats, & c.) Regulations 1994 (as amended).	Working during the hours of darkness will be avoided as far as practicable to reduce disturbance to protected species, particularly roosting geese and otter. Working during the hours of darkness will likely be unavoidable during winter, therefore lighting will need to avoid illuminating sensitive bird habitats adjacent to the bridge watercourses; known commuting routes, and where there is known activity of protected species (**Mitigation Item TE1**).	Contractor	N/A	This mitigation item will be detailed in the CEMP. The Contractor's ECoW will monitor compliance.	Details of Individual responsible: Initial: Date:
TE5	Throughout scheme/LMA	Pre-construction	To capture any changes to the baseline which may affect the outcome of the ecological assessment for the proposed scheme.	Pre-construction surveys will be undertaken to verify and, where required, update the baseline ecological conditions set out in the EIA Report.	Designer/Contractor	N/A	The requirement for pre-construction surveys will be included as an Employer's Requirement in Contract.	Details of Individual responsible: Initial: Date:

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TE6	Throughout scheme/LMA	Pre-construction & Construction	To avoid significant effects on peregrine during construction works and comply with the Wildlife and Countryside Act 1981 (as amended).	Construction work will be programmed, where possible, to commence outside of peregrine breeding season. If this cannot be achieved, monitoring surveys will be undertaken to determine if/when peregrine return to their previous nest, or if peregrine move to an alternate nest site, and will commence prior to construction. The natural programme of works should allow for a gradual increase in personnel and noise (e.g. construction of compound first, followed by temporary working platform, temporary bridge and eventually destruction of the piled viaduct) to allow peregrine to habituate so that disturbing works during the breeding season will unlikely disturb peregrine or have implications for the success of the breeding attempt. Although considered unlikely, should significant disturbance be observed by the Ecological Clerk of Works (ECoW), works will stop until further mitigation measures are put in place as determined by the ECoW in consultation with Scottish Natural Heritage (SNH), if required. The Construction Environmental Management Plan (CEMP) will include a Species Management Plan for peregrine which will provide further detail on mitigation for this species.	Designer/Contractor	Consultation with SNH (if required)	The requirement for the ECoW to undertake surveys and CEMP (including species management plans) will be included as an Employer's Requirement in Contract. The Contractor's ECoW will undertake monitoring surveys and monitor compliance during construction.	Details of Individual responsible: Initial: Date:
TE7	Throughout scheme/LMA	Pre-construction	To avoid damage or destruction of occupied nests or harm to breeding birds and comply with the Wildlife and Countryside Act 1981 (as amended).	Vegetation clearance and the start of construction works should be undertaken outside the core bird breeding season (March to August inclusive) to avoid damage or destruction of occupied nests or disturbance to breeding birds. If this cannot be achieved, an inspection of vegetation to be cleared and the works area (plus a suitable disturbance buffer) for nesting birds will be undertaken by a suitably qualified ecologist no more than 24 hours prior to any works being undertaken. If any nesting birds are identified during the survey, they will be left in situ for their entire nesting period until the young birds have fledged. Alternative approaches to the work will need be proposed e.g. leaving an exclusion zone around the nest to avoid disturbance. All cleared vegetation will be rendered unsuitable for nesting birds, for example, by covering, chipping or removing from works area depending on the end purpose of the vegetation. Vegetation clearance operations such as chipping must be taken in accordance with Scottish Environment Protection Agency's (SEPA) Management of Forestry Waste (WST-G-027) (SEPA 2017) guidance.	Contractor	N/A	This mitigation item will be detailed in the CEMP. The Contractor's ECoW will monitor compliance.	Details of Individual responsible: Initial: Date:
TE8	Throughout scheme/LMA	Post-construction	To replace habitat temporarily lost during construction.	On completion of the works, vegetation cleared to facilitate construction, e.g. scrub removed to permit construction of site access tracks, will be replaced on a like for like basis.	Contractor	N/A	The requirement to replace lost vegetation will be included as an Employer's Requirement in Contract. The Contractor's ECoW will monitor compliance.	Details of Individual responsible: Initial: Date:
TE9	Throughout scheme/LMA	Construction	To avoid mammals becoming trapped during construction.	Trenches, holes and pits will be kept covered at night or provide a means of escape for mammals that may become entrapped.	Contractor	N/A	This mitigation item will be detailed in the CEMP. The Contractor's ECoW will monitor compliance.	Details of Individual responsible: Initial: Date:
TE10	Throughout scheme/LMA	Construction	To mitigate potential direct mortality of otter and comply with the Conservation (Natural habitats &c) Regulations 1994 (as amended in Scotland).	All machinery stored on site and the immediate area (any plant, excavations, etc.) will be checked at the start of each work day to ensure otters are not present.	Contractor	N/A	This mitigation item will be detailed in the CEMP. The Contractor's ECoW will monitor compliance	Details of Individual responsible: Initial: Date:

Mitigation Item/Source	Location of measure	Timing of Measure	Mitigation Purpose/Objective including legislative requirements if applicable	Environmental Actions/Commitments	Responsible Party for Overseeing Implementation	Specific Consultation or Approval Required	Monitoring / Compliance	Completion Record[2]
TE11	Throughout scheme/LMA	Pre-construction & Construction	To mitigate potential direct mortality of otter and comply with the Conservation (Natural habitats &c) Regulations 1994 (as amended in Scotland)..	The positioning of construction compounds, storage areas, temporary access tracks etc. and construction works should avoid otter commuting routes as far as practicable.	Contractor	N/A	This mitigation item will be detailed in the CEMP. The Contractor's ECoW will monitor compliance	Details of Individual responsible: Initial: Date:
TE12	n/a	Pre-construction & Construction	To comply with conservation legislation for example the Conservation (Natural Habitats, & c.) Regulations 1994 (as amended).	Licences in respect of works necessary to construct the proposed scheme that are likely to breach applicable conservation legislation will be obtained. The Contractor will comply with the requirements or conditions of any granted licence. Licensing may be for the UK and/or European Protected Species.	Contractor	Approval from SNH and Marine Scotland	The requirement to obtain licences will be included as an Employer's Requirement in Contract. The Contractor's ECoW will monitor compliance.	Details of Individual responsible: Initial: Date:
TE13	n/a	Pre-construction	To comply with conservation legislation i.e. The Conservation (Natural Habitats, & c.) Regulations 1994 (as amended).	A licence application will be submitted to Scottish Natural Heritage (SNH) by an ecologist, acting on behalf of Transport Scotland, to permit destruction of the existing holt.	Designer	Approval from SNH	N/A	Details of Individual responsible: Initial: Date:
TE14	500m from existing otter holt	Pre-construction & Construction	To mitigate permanent habitat loss for otter and comply with the Conservation (Natural Habitats, & c.) Regulations 1994 (as amended).	A replacement artificial otter holt will be constructed at least six months prior to the closure of the existing holt. The replacement holt will be located within 500m of the existing holt on Scottish Ministers land, as agreed; for the exact location see Appendix A9.3 (Confidential Ecology Features). The holt will be constructed above ground where there is a suitable route of access, and within 10m from the water's edge to maximise the likelihood of it being found and used by otters. Specifications for the replacement artificial holt will be detailed in a licence application submitted to Scottish Natural Heritage (SNH) to destroy the existing holt (**Mitigation Item TE13**) and within a Species Management Plan which will be produced prior to construction of the replacement holt.	Designer	Approval from SNH (licence application)	Ecologist (acting on behalf of Transport Scotland) to monitor replacement holt.	Details of Individual responsible: Initial: Date:
Further to the above, the mitigation commitments detailed in Chapter 7 (Road Drainage and the Water Environment) (W), Chapter 8 (Marine Ecology) (ME), and Chapter 12 (Noise and Vibration) (NV) will be implemented to protect terrestrial ecology features, as shown in Table 9.7 of the EIA Report.								
Cultural Heritage Mitigation (EIA Report)								
CH1	Throughout scheme/LMA	Construction	To make a permanent record of any affected unknown archaeological remains.	Archaeological recording during construction (an archaeological watching brief) will be undertaken to make a permanent record of any surviving unknown archaeological remains that may be identified. This will be undertaken in accordance with relevant guidance provided by the Chartered Institute for Archaeologists, Historic Environment Scotland (HES) and Historic England, and a Written Scheme of Investigation (WSI) that will be agreed with the Curator and Transport Scotland's historic environment advisor. This includes a programme of assessment, reporting, analysis, publication and dissemination of the results of the archaeological watching brief, including the submission of a report to Falkirk and Fife's Historic Environment Records and the National Record of the Historic Environment.	Contractor	Consultation with the Curator and Transport Scotland	To be included as an Employer's Requirement in the Contract.	Details of Individual responsible: Initial: Date:

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CH2	Piled viaduct	Pre-construction	To make a permanent record of Kincardine Bridge.	A historic building survey will be undertaken prior to construction to make a record of the original piled viaduct, and its temporary steel support structure, in the context of the bridge as a whole. This will be achieved through a laser scan of the bridge and the production of an enhanced historic building record in accordance with the guidance provided Historic Building Recording Guidance (ALGAO: Scotland 2013) and a WSI that will be agreed with the Curator and Transport Scotland's historic environment advisor. This includes a programme of assessment, reporting, analysis, publication and dissemination of the results, including the submission of a report to Falkirk and Fife's Historic Environment Records and the National Record of the Historic Environment.	Transport Scotland	Consultation with the Curator and Transport Scotland	N/A	Details of Individual responsible: Initial: Date:
CH3	Bridge	Construction	To provide a clear rationale and justification for the retention or replacement of each removed bridge parapet panel.	Following the removal of the bridge parapet panels from site the appointed Contractor will undertake a detailed condition assessment of each removed bridge parapet panel. The appointed Contractor will prepare a report detailing the findings of this assessment and a justification for the retention or replacement of removed each bridge parapet panel. The report will be submitted to Falkirk Council for approval, who may undertake further consultation with HES. No disposal or replacement of any of the removed bridge parapet panels shall be undertaken by the appointed Contractor until after written approval of the findings of the report is received from Falkirk Council.	Contractor	Approval of report required from Falkirk Council.	To be included as an Employer's Requirement in the Contract.	Details of Individual responsible: Initial: Date:
Air Quality Mitigation (EIA Report)								
AQ1	n/a	Pre-construction and Construction	To minimise dust emissions as a result of construction of the proposed scheme.	The Construction Environmental Management Plan (CEMP) (refer to Mitigation Item SM1) will adopt best practice measures to control dust emissions in compliance with IAQM guidance on the assessment of dust from demolition and construction. The Contractor will enter into pre-works discussions with Falkirk Council to agree the method of works and appropriate dust mitigation measures outlined in a Dust Management Plan (DMP). Guidance on appropriate mitigation measures for the proposed scheme (defined as a medium risk site) is provided in Table 10 to Table 15 in Appendix A11.1: Air Quality - Dust Risk Assessment of this EIA Report. These mitigation measures will be used as a guide to inform the best practice measures within the DMP and will be reviewed as the Contractor confirms further details of the construction activities, location and programme.	Contractor	Approval from Falkirk Council.	Monitoring report to be produced as per the IAQM (2016) guidance prepared by the Contractor quarterly.	Details of Individual responsible: Initial: Date:
Noise and Vibration Mitigation (EIA Report)								
NV1	n/a	Pre-construction and Construction	To set out how the Contractor intends to operate the construction site, including construction related mitigation measures.	A Construction Environmental Management Plan (CEMP) will be prepared by the Contractor. The CEMP will set out how the Contractor intends to operate the construction site, including construction-related mitigation measures. The relevant section(s) of the CEMP will be in place prior to the start of construction work and will cover a range of aspects including noise and vibration.	Contractor	Consultation with Falkirk Council	CEMP to be included as Employer's Requirement in the Contract.	Details of Individual responsible: Initial: Date:
NV2	Throughout scheme/LMA	Pre-construction and Construction	To agree noise and vibration limits and design receptor specific mitigation, over and above the standard mitigation detailed in Mitigation Item NV5, where required.	Noise and vibration limits for residential and ecological Noise Sensitive Receptors (NSR)s will be agreed with the Falkirk Council Environmental Health Department and SNH, respectively, and these limits will be incorporated into the Contract Documents. The Contractor will be required to develop and implement a Noise and Vibration Management Plan (NVMP) as part of the CEMP to meet these requirements. The NVMP will include the design of any necessary NSR specific construction mitigation over and above the standard mitigation included within Chapter 12 (Noise and Vibration) of the EIA Report.	Designer & Contractor	Approval from Falkirk Council and SNH	NVMP to be included as Employer's Requirement in the Contract.	Details of Individual responsible: Initial: Date:

Mitigation Item/Source	Location of measure	Timing of Measure	Mitigation Purpose/Objective including legislative requirements if applicable	Environmental Actions/Commitments	Responsible Party for Overseeing Implementation	Specific Consultation or Approval Required	Monitoring / Compliance	Completion Record[2]
NV3	n/a	Pre-construction and Construction	To inform stakeholders and consultees throughout the construction period.	The Contractor will appoint a community liaison officer who will: • liaise with the relevant local authorities and nearby residents affected by the construction works and provide a feedback mechanism for any concerns to be raised; • consult and seek approval from Falkirk Council regarding any proposed working outwith normal working hours; • notify occupiers of nearby properties a minimum of two weeks in advance of the nature and anticipated duration of planned construction works that may affect them; and • establish a dedicated freephone telephone helpline together with a dedicated email address and postal address for enquiries and complaints during the construction phase. The relevant contact numbers, email and postal addresses will as a minimum be displayed on signs around the construction site and will be published on the project website. Enquiries and complaints will be logged in a register and appropriate action will be taken in response to any complaints.	Contractor	Consultation with Falkirk Council	N/A	Details of Individual responsible: Initial: Date:
NV4	n/a	Pre-construction and Construction	To ensure site workers are aware of best practice construction methods, mitigation measures and how they are implemented.	The Contractor will ensure that all site workers receive adequate environmental training relevant to their role prior to working on the construction site. This will include specific environmental project inductions and 'toolbox talks' on best practice construction methods as appropriate, which would be anticipated to include those relating to noise and vibration control, by employing techniques to keep site noise to a minimum. This would be effectively supervised to ensure that best working practice in respect of noise and vibration reduction is followed.	Contractor	None required	N/A	Details of Individual responsible: Initial: Date:

Mitigation Item/Source	Location of measure	Timing of Measure	Mitigation Purpose/Objective including legislative requirements if applicable	Environmental Actions/Commitments	Responsible Party for Overseeing Implementation	Specific Consultation or Approval Required	Monitoring / Compliance	Completion Record[2]
NV5	Throughout scheme/LMA	Pre-construction and Construction	To reduce, as far as practicable, the level of noise to which operators and others in the vicinity of site operations would be exposed. Compliance with The Control of Pollution Act 1974, Section 60 (4): '*In acting under this section the local authority shall have regard…(b) to the need for ensuring that the best practicable means are employed to minimise noise*'.	The Contractor will use best practicable means to limit the level of noise to which operators and others in the vicinity of site operations would be exposed. This includes the following: • the hours of working will be planned and account will be taken of the effects of noise upon persons in areas surrounding site operations and upon persons working on site, taking into account the nature of land use in the areas concerned, the duration of work and the likely consequence of any lengthening of work periods; • where reasonably practicable, quiet working methods will be employed, including use of the most suitable plant, reasonable hours of working for noisy operations, and economy and speed of operations; • noise will be controlled at source, for example, by modification of existing plant/equipment, its use and location and ensuring maintenance of all noise-generating equipment; • the spread of noise will be limited, i.e. by distance between source and receiver and/or screening; • on-site noise levels will be monitored regularly, particularly if changes in machinery or project designs are introduced, by a suitably qualified person appointed specifically for the purpose; • on those parts of a site where high levels of noise are likely to be a hazard to persons working on the site, prominent warning notices will be displayed and, where necessary, ear protectors will be provided; • proper use of plant with respect to minimising noise emissions and regular maintenance in line with plant manuals; • where appropriate, inherently quiet plant will be selected. All major compressors will be 'sound reduced' models fitted with properly lined and sealed acoustic covers which will be kept closed whenever the machines are in use and all ancillary pneumatic percussive tools will be fitted with mufflers or silencers of the type recommended by the manufacturers; • machines in intermittent use will be shut down in the intervening periods between work or throttled down to a minimum; • all ancillary plant such as generators, compressors and pumps will be positioned so as to cause minimum noise disturbance. If necessary, acoustic barriers or enclosures will be provided; and • adherence to the codes of practice for construction working and piling given in British Standard (BS) 5228-1 and BS 5228-2 and the guidance given therein regarding minimising noise and vibration emissions from the site.	Contractor	None required	N/A	Details of Individual responsible: Initial: Date:
Material Assets and Waste Mitigation (EIA Report)								
M&W1	Throughout scheme/LMA	Pre-construction and Construction	To minimise material assets consumption and waste generation in accordance with the Waste (Scotland) Regulations 2011 (as amended).	Implement Zero Waste Scotland's (ZWS) Design for Resource Efficient (DfRE) Construction Principles, throughout the construction of the proposed scheme.	Contractor	Transport Scotland	Responsible Sourcing Plan and Site Waste Management Plan (SWMP) requirement will be included as an Employer's Requirement in Contract.	Details of Individual responsible: Initial: Date:

Mitigation Item/Source	Location of measure	Timing of Measure	Mitigation Purpose/Objective including legislative requirements if applicable	Environmental Actions/Commitments	Responsible Party for Overseeing Implementation	Specific Consultation or Approval Required	Monitoring / Compliance	Completion Record[2]
M&W2	n/a	Pre-construction and Construction	To use responsibly sourced materials that minimise adverse impacts on people and their environment, and reduce the attendant environmental impacts related to the extraction and manufacture of construction materials.	Prepare a Responsible Sourcing Plan to maximise the responsible sourcing of materials and products associated with constructing the proposed scheme.	Contractor	Transport Scotland	Responsible Sourcing Plan requirement will be included as an Employer's Requirement in Contract.	Details of Individual responsible: Initial: Date:
M&W3	Throughout scheme/LMA	Pre-construction and Construction	To reduce the attendant environmental impacts of managing waste, embed circular economy principles into the proposed scheme decisions, and deliver the best overall environmental outcome in accordance with the Waste (Scotland) Regulations 2011 (as amended)..	Take all such measures available to it, as are reasonable in the circumstances, to apply the waste hierarchy as a priority order to the management of waste.	Contractor	Transport Scotland	SWMP requirement will be included as an Employer's Requirement in Contract.	Details of Individual responsible: Initial: Date:
M&W4	n/a	Pre-construction and Construction	To set out how all construction phase waste will be managed to support the delivery of the Scottish Government's Zero Waste Plan Targets, and ensure compliance with the following legislation: • The Waste (Scotland) Regulations 2011 (as amended); • The Waste (Scotland) Regulations 2012 (as amended); and • The Environmental Protection (Duty of Care) (Scotland) Regulations 2014 (as amended). .	Develop a SWMP to identify, prior to the start of construction works, to plan, implement, monitor and review waste minimisation and management throughout the construction programme; and ensure compliance with duty of care requirements.	Contractor	Transport Scotland	SWMP requirement will be included as an Employer's Requirement in Contract.	Details of Individual responsible: Initial: Date:
M&W5	n/a	Pre-construction and Construction	To ensure compliance with the legislative framework for waste, and prevent harm to human health and the environment. This framework includes, but is not limited to: • The Environmental Protection Act 1990 (as amended); • The Waste (Scotland) Regulations 2011 (as amended); • The Waste Management Licensing (Scotland) Regulations 2011 (as amended); • The Pollution Prevention and Control (Scotland) Regulations 2012 (as amended); • The Environmental Protection (Duty of Care) (Scotland) Regulations 2014 (as amended); and • The Special Waste Regulations 1996 (as amended).	Comply with all 'Duty of Care' requirements ensuring that all surplus materials and waste are stored, transported, treated, used and disposed of safely without endangering human health or harming the environment.	Contractor	Consultation and approval from the Local Authority and/or SEPA as applicable to regulatory requirements.	SWMP requirement will be included as an Employer's Requirement in Contract.	Details of Individual responsible: Initial: Date:

Mitigation Item/Source	Location of measure	Timing of Measure	Mitigation Purpose/Objective including legislative requirements if applicable	Environmental Actions/Commitments	Responsible Party for Overseeing Implementation	Specific Consultation or Approval Required	Monitoring / Compliance	Completion Record[2]
Climate Mitigation (EIA Report)								
CC1: Travel Management Plan (TMP)	n/a	Pre-construction (before the initiation of works and when the required data are available)	Greenhouse Gas (GHG) emissions reduction.	The Contractor will prepare a TMP to capture the proposed travelling of staff required for the construction of the proposed scheme and measures to optimize journeys and demonstrate how the TMP has contributed to reduced carbon emissions.	Contractor	Yes / Transport Scotland	Quarterly carbon emissions report during the construction prepared by the Contractor to be required via inclusion in Employer's Requirements.	Details of Individual responsible: Initial: Date:
CC2: Construction Environmental Management Plan (CEMP)	Throughout scheme	Pre-construction and Construction	GHG emission monitoring.	As part of the CEMP, the Contractor should incorporate energy efficiency and carbon reduction measures on site where practicable.	Contractor	Yes / Transport Scotland	Quarterly carbon emissions report during the construction prepared by the Contractor to be required via inclusion in Employer's Requirements.	Details of Individual responsible: Initial: Date:
CC3: Quarterly Carbon Emissions Reporting	n/a	Construction	GHG emission monitoring.	Estimate and report carbon emissions on a quarterly basis during Construction Phase using the Carbon Management Systems (CMS) Carbon Tool	Contractor	Yes / Transport Scotland	Quarterly carbon emissions report during the construction prepared by the Contractor to be required via inclusion in Employer's Requirements.	Details of Individual responsible: Initial: Date:
Licences and Conditions from Consultation								
N/A	n/a	Pre-construction and Construction	Forth Ports Limited advised during consultation that a works licence should be obtained from Forth Ports Limited prior to any works being undertaken as this falls within its area of jurisdiction. Forth and Tay Navigation Department to be provided all relevant information to allow Notice to Mariners and other relevant paperwork to be issued in connection with the works. Northern Lighthouse Board advised during consultation that Forth Ports should be contacted with regard to dissemination of Navigation Warnings and Notice to Mariners concerning the works and that any permanent alterations should be communicated to the UK Hydrographic Office for update of the relevant British Admiralty chart.	N/A	Designer/Contractor	Approval of works licence from Forth Ports required. Consultation with Forth Ports Forth and Navigation Department to provide all relevant information to allow Notice to Mariners and other relevant paperwork to be issued in connection with the works. Any permanent alterations to be communicated to the UK Hydrographic Office for update of the relevant British Admiralty chart.	Employer's requirement in the Contract.	Details of Individual responsible: Initial: Date:

Mitigation Item/Source	Location of measure	Timing of Measure	Mitigation Purpose/Objective including legislative requirements if applicable	Environmental Actions/Commitments	Responsible Party for Overseeing Implementation	Specific Consultation or Approval Required	Monitoring / Compliance	Completion Record[2]
Mitigation for Non-Significant Effects on Scoped-out Environmental Topics								
People and Communities – Community and Private Assets Mitigation (Scoping Report)								
CPA1	Throughout scheme/LMA	Construction	To maintain access to/from land and properties.	The Contractor will ensure access is maintained to land and properties adjacent to the temporary works area at all times during construction.	Contractor	None required	CEMP	Details of Individual responsible: Initial: Date:
People and Communities – Effects on All Travellers Mitigation (Scoping Report)								
AT1	Throughout scheme/LMA	Construction	To minimise length of closures or restrictions of access for Non-Motorised Users (NMUs).	The construction programme will minimise the length of closures or restrictions of access for NMUs as far as reasonably practicable.	Contractor	None required	N/A	Details of Individual responsible: Initial: Date:
AT2	Throughout scheme/LMA	Construction	To maintain safe access for NMUs throughout the construction works.	Where practicable, temporary diversion routes and/or assisted crossings will be provided to maintain safe access for NMUs throughout the construction works. Any closure or re-routing of routes used by NMUs will take cognisance of the 'Roads for All: Good Practice Guides for Roads' (Transport Scotland 2013). These will be agreed in advance with the relevant local authorities and will be clearly indicated with signage as appropriate.	Contractor	Any closures will be agreed with Transport Scotland (Rights of Way), and Falkirk Council and Fife Council (local and core paths).	N/A	Details of Individual responsible: Initial: Date:
AT3	n/a	Pre-construction	To maintain safe access for NMUs throughout the construction works and to enable Sustrans to update their website to notify users that a diversion will be in place.	The Contractor will notify Sustrans Scotland a minimum of two weeks in advance of any diversions to NMU routes.	Contractor	Consultation with Sustrans	N/A	Details of Individual responsible: Initial: Date:
AT4	n/a	Pre-construction and Construction	To avoid or reduce disruption to the road traffic.	The Contractor will produce a traffic management plan that will include measures to avoid or reduce disruption to the road traffic, and in accordance with the Traffic Signs Manual (Department of Transport 2009). The plan will include consideration of the timing of works, measures to reduce site traffic on the public roads and a well-maintained traffic management system with sweeping of roads to reduce construction debris on the carriageway	Contractor	None required	N/A	Details of Individual responsible: Initial: Date:
AT5	Throughout scheme/LMA	Construction	To reduce disruption to road users.	Reasonable precautions will be taken by the Contractor to avoid or reduce road closures. One lane in each direction will be provided for traffic during peak hours (Mon to Fri) except in exceptional circumstances and for closures which are pre-approved by Transport Scotland e.g. limited short-term closure to allow connection of the temporary bridge to the existing Kincardine Bridge and the subsequent removal of the temporary bridge. In order to minimise disruption these could be planned as overnight closures.	Contractor	Approval from Transport Scotland	N/A	Details of Individual responsible: Initial: Date:

Mitigation Item/Source	Location of measure	Timing of Measure	Mitigation Purpose/Objective including legislative requirements if applicable	Environmental Actions/Commitments	Responsible Party for Overseeing Implementation	Specific Consultation or Approval Required	Monitoring / Compliance	Completion Record[2]
AT6	Throughout scheme/LMA	Construction	To reduce disruption to road users.	Road diversions will be clearly indicated with road markings and signage as appropriate. Any road closures will be notified in advance through road signage and appropriate signage will be provided for the duration of the closure. The Contractor will also be responsible for identifying any notable changes in patterns of road network use during construction, where such changes may cause significant disruption elsewhere and will review and update traffic management provisions as appropriate in discussion with Transport Scotland.	Contractor	Consultation with Transport Scotland, Falkirk Council and Fife Council.	N/A	Details of Individual responsible: Initial: Date:
AT7	Throughout scheme/LMA	Construction	To reduce potential adverse amenity impacts on NMU and vehicle travellers during construction.	Appropriate lighting will be provided during any necessary night-time working, taking into account potential ecological mitigation (**Mitigation Item TE1**).	Contractor	None required	N/A	Details of Individual responsible: Initial: Date:
AT8	Throughout scheme/LMA	Construction	To maintain access for NMUs and provide appropriate facilities based on use and improve access for NMUs.	Access for NMUs will be maintained and improved in accordance with the following principles: • The requirements of the Equality Act 2010 and 'Roads for All: Good Practice Guides for Roads' (Transport Scotland 2013) shall be incorporated into the proposed scheme wherever practicable; e.g. ramps or footpaths will not present potential barriers to disabled people such as the gradient or surfacing. • Surfacing of any new paths including alongside roads will be considered on a case by case basis taking into account factors such as safety, the type of user and should comply with current standards. • New cycleways/footpaths will use non-frost susceptible materials to reduce risk of degradation.	Contractor	None required	N/A	Details of Individual responsible: Initial: Date:
Landscape and Visual Mitigation (Scoping Report)								
LV1	All storage areas	Construction	To reduce landscape and visual impact of plant and material storage areas.	As far as practicable, construction plant and materials storage areas will be appropriately sited to minimise their landscape and visual impact.	Contractor	None required.	Via supervision requirements outlined in Contract Documents.	Details of Individual responsible: Initial: Date:
LV2	Throughout scheme/LMA	Construction	To reduce visual impact of the construction site.	The construction site will be kept tidy (e.g. free of litter and debris).	Contractor	None required.	Via supervision requirements outlined in Contract Documents.	Details of Individual responsible: Initial: Date:
LV3	Throughout scheme/LMA	Construction	To reduce light pollution/glare during night time working.	Work during hours of darkness will be avoided as far as practicable and, where necessary, directing lighting will be used to minimise light pollution/glare. Light levels will be kept to the minimum necessary for security and safety.	Contractor	None required.	Via supervision requirements outlined in Contract Documents.	Details of Individual responsible: Initial: Date:

Mitigation Item/Source	Location of measure	Timing of Measure	Mitigation Purpose/Objective including legislative requirements if applicable	Environmental Actions/Commitments	Responsible Party for Overseeing Implementation	Specific Consultation or Approval Required	Monitoring / Compliance	Completion Record[2]
LV4	n/a	Pre-construction and Construction	To reinstate vegetation (outwith the saltmarsh) affected by the construction.	A Site Restoration Plan will be developed for the site and detailed within the CEMP.	Designer and Contractor	None required	For the duration of the Establishment Period	Details of Individual responsible: Initial: Date:

4 Consents and Permissions

4.1 The Contractor will be required to comply with the conditions of all permits, consents and licences obtained during the construction phase. Table 4 lists the anticipated consents and licences, including the party responsible for obtaining the licences, and will be reviewed and updated by the Contractor, as required, throughout the proposed scheme.

[Note: Contractor to update as required]

Table 4: Anticipated Consents/Licences Required

Consent / Licence Required	Relevant Legislation	Description	Relevant Mitigation Item	Timing	Party Responsible for Obtaining
Marine Licence	Marine (Scotland) Act 2010 Marine Licensing (Pre-application Consultation) (Scotland) Regulations 2013	The Marine (Scotland) Act 2010 requires that licences are obtained from the Scottish Ministers for certain activities, including construction work, below the mean high water springs limit.	**W2**	Construction	Designer
Listed Building Consent	Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 (as amended by the Historic Environment Scotland Act 2014)	As the Kincardine Bridge is a Category A Listed Building, the proposed scheme will require listed building consent and the works will be carried out in accordance with the conditions attached to such consent.	**N/A**	Pre-construction and Construction	Designer
Protected Species Licence: Destruction of Otter Holt	Conservation (Natural Habitats, &c.) Regulations 1994 (as amended in Scotland)	A replacement artificial otter holt will be constructed at least six months prior to the closure of the existing holt. Specifications for the replacement artificial holt will be detailed in a licence application submitted to Scottish Natural Heritage (SNH) to destroy the existing holt and within a Species Management Plan which will be produced prior to construction of the replacement holt. The ecologist acting on behalf of Transport Scotland will submit the licence application to SNH and ensure compliance with any licence conditions.	**TE13, TE14**	Pre-construction and Construction	Designer
Protected Species Licence: Potential licences required in	Conservation (Natural Habitats, &c.) Regulations 1994 (as	Licences in respect of works necessary to construct the proposed scheme that are likely to breach applicable conservation legislation will be obtained where required. The Contractor will	**TE12**	Pre-construction and Construction	Contractor

Consent / Licence Required	Relevant Legislation	Description	Relevant Mitigation Item	Timing	Party Responsible for Obtaining
respect of works necessary to construct proposed scheme	amended in Scotland)	comply with the requirements or conditions of any granted licence.			
CAR Licence: Road Drainage and the Water Environment	The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR)	Compliance with the conditions of the Marine licence, CSL (if required) and any CAR authorisation (if required).	**W2**	Pre-construction and Construction	Contractor
CAR Licence: Geology, Soils and Groundwater	The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR)	The potential volume of groundwater drainage would be considered in the context of potential groundwater abstraction CAR licences prior to works commencing.	**G10**	Pre-construction and Construction	Contractor
Works Licence obtained from Forth Ports Ltd	N/A	Forth Ports Limited advised during consultation that a works licence should be obtained from Forth Ports Limited prior to any works being undertaken as they fall within its area of jurisdiction. Forth Ports Forth and Tay Navigation Department to be provided all relevant information to allow Notice to Mariners and other relevant paperwork to be issued in connection with the works. Northern Lighthouse Board advised during consultation that Forth Ports should be contacted with regard to dissemination of Navigation Warnings and Notice to Mariners concerning the works and that any permanent alterations should be communicated to the UK Hydrographic Office for update of the relevant British Admiralty chart.	N/A	Pre-construction and Construction	Designer/ Contractor

5 Environmental Asset Data and As-Built Drawings

Collection and Submission of Environmental Data

5.1 The collection and submission of environmental data is an ongoing process. At this stage of the project, i.e. design, the collection and submission of environmental data will be achieved through the publication of the EIA Report. Where additional environmental data is expected to be required during the pre-construction and construction phases the Contractor is responsible for collating and submitting this data to Transport Scotland and any relevant stakeholders. During these stages, the Contractor should update this section of the CEMP to detail the submission arrangements of data.

5.2 Table 5 summarises the ecology surveys undertaken during the EIA process. Further information on these surveys can be found in Chapter 8 (Marine Ecology) and Chapter 9 (Terrestrial Ecology) and associated appendix and figures of the EIA Report. Further details on the requirements for ecological surveys during the pre-construction, construction and post-construction phases are provided in Appendix A8.2 (Outline Saltmarsh Management Plan) and Appendix A9.4 (Outline Ecological Management Plan).

[Note: Contractor to update as required]

Table 5: Summary of Species Surveys Obtained to Date

Survey Type	Date	Location
Extended Phase 1 Habitat Survey	June 2017 and November 2019	250m study area around the Kincardine Bridge.
Bat: Ground-Based Roost Assessment	November 2017	The Kincardine Bridge and all buildings, structures and tress within 50m of the proposed works at the southern piled viaduct.
Bat: Activity Surveys	June to August 2017	Kincardine Bridge.
Bat: Passive Detectors	August to September 2017; May to June 2018	Four locations along the Kincardine Bridge.
Birds: Wetland (Through The Tide Count Surveys)	April 2017 to April 2018	Up to 500m either side of the Kincardine Bridge in the Forth Estuary (shoreline, intertidal and open water areas).
Birds: Goose Roosts	September 2017 to March 2018	500m study area around the southern piled viaduct of the Kincardine Bridge.
Birds: Breeding	May to July 2017; April to May 2018	500m either side of the Kincardine Bridge.
Great Crested Newt (GCN)	November 2018 and November 2019	Within the footprint of the scheme and a 500m buffer from the southern piled viaduct of the Kincardine Bridge.
Otter	November 2017 to June 2018; November 2019	Within 250m of the southern piled viaduct of the Kincardine Bridge, mainly along watercourses and waterbodies.
Peregrine	April to June 2018	Kincardine Bridge.
Saltmarsh Survey	June 2018 and September 2020	Saltmarsh habitat on the southern shore of the Forth estuary to a minimum of 100m either side of the Kincardine Bridge.

Collection and Submission of Engineering Data

5.3 It is anticipated that the proposed scheme would be procured by means of a Transport Scotland model document contract. Under the terms of this contract type, the detailed design of the replacement piled viaduct structure is undertaken by Transport Scotland and the Contractor would undertake both the design of the temporary works and construction of the proposed scheme. Engineering data, including design drawings, used in the EIA Report will be made available to the tenderers and/or the appointed Contractor as appropriate.

5.4 As such, the Contractor would be required to submit design drawings for the temporary works and as built drawings on completion to Transport Scotland as required.

[Note: Contractor to update as required]

6. Details of Maintenance and Outline CEMP Monitoring Activities

Environmental Monitoring Requirements

6.1 This section summarises the systems of monitoring which will be required to maintain an audit trail of the environmental obligations of the proposed scheme.

Monitoring of Proposed Mitigation

6.2 The Contractor will be responsible for implementing and, where appropriate monitoring, the mitigation measures outlined in Table 3.

6.3 As described in Table 1 and Table 3, the Contractor's compliance with specific mitigation measures will be monitored through a number of different means. Monitoring of compliance and ensuring construction activities are carried out in such a manner to reduce environmental impacts may be conducted by an Environmental Clerk of Works (EnvCoW), an Ecological Clerk or Works (ECoW) or an ecologist appointed by Transport Scotland. The specific measures these representatives may take in order to provide this monitoring of compliance will be detailed in the Employers Requirements in the Contract. In addition, site visits from SEPA are considered likely to monitor compliance of pollution prevention mitigation and any licence conditions.

6.4 The Contractor will keep a record of environmental mitigation monitoring and any potential areas of non-compliance as well as completing a final environmental investigation. The Contractor should record this monitoring by updating Annex F (Final Environmental Investigation and Monitoring Reports) of this Outline CEMP as appropriate.

Environmental Management Plans

6.5 The Contractor will be required to provide environmental management plans which inherently require monitoring of environmental data and the interaction with construction activities. Annex B (Relevant Management Plans) provides a list of some of the environmental management plans that are likely to be required as part of the proposed scheme works. The Contractor will monitor compliance using these management plans and should update this annex with the plans as appropriate.

6.6 Outline saltmarsh and ecological management plans have been produced as part of the EIA Report within Appendix A8.2 (Outline Saltmarsh Management Plan) and Appendix A9.4 (Outline Ecological Management Plan). The Contractor is required to follow the guidance therein and update the management plans where appropriate.

7. Induction, Training and Briefing Procedures for Staff

Introduction

7.1 Table 6 identifies an indicative programme of training on environmental issues relevant to the proposed scheme that have been identified for delivery prior to and during the construction stage. On commencement of site mobilisation, the Contractor will be responsible for site inductions and training of all personnel on the site, whether visitors, full time staff or subcontractors.

7.2 All individuals working on or visiting the site will be required to attend the Contractor's site-specific induction. Those participating in or near to specific activities that have an environmental impact will be required to attend additional training led by the Contractor or appointed specialists, on ecology, pollution control, waste management and emergency procedures for minor and major incidents etc. The Contractor should update Annex D (Emergency Procedures and Record of Any Environmental Incidents) with emergency procedure guidance and with a record of incidents.

7.3 Toolbox talks will be posted within common use areas such as welfare unit areas. Key environmental issues linked to the programme will be targeted on the daily notice board as a reminder to all staff on site, e.g. seasonal environmental constraints such as bird nesting seasons.

7.4 The list below (in Table 6) is not exhaustive, and the Contractor or an appointed specialist on site must highlight requirements for additional training as the project progresses to improve and add value to the overall site environmental awareness and compliance. It is a requirement for the site to maintain the standard of environmental management and minimise risks that could negatively impact on the environment. The Contractor must keep a record of training for audit and monitoring purposes.

7.5 Any additional induction and training requirements should be inserted in Table 6 by the Contractor as they are identified throughout the lifetime of the proposed scheme.

[Note: Contractor to update as required]

Table 6: Indicative Training Programme

Topic	Personnel	Delivery	Description
Site Safety Induction and Environmental Awareness	All	Site induction	The following list is not exclusive, but environmental training at induction is likely to include: • company/project environmental policy; • site environment; • fuel containment; • earthworks and excavations (risk of exposing contamination); • pollution protocol and measures (e.g. use of spill kits); • defined materials storage area (excavated and imported); • defined waste areas (domestic and construction materials); • wheel wash and road sweeping; • dust and emissions control; • noise and vibration control; • site traffic protocols and routes in the form of a Traffic Management Plan (TMP) (including haul routes and staff travel to site plan); • warning signs; • site inspection and monitoring forms; • material procurement; • toolbox talks where relevant to specific works;

Topic	Personnel	Delivery	Description
			• communication systems on site (e.g. dealing with the public, incident and near miss reporting , environmental observations and suggestions etc.); • site organisation, key personnel responsibilities and contact details; • emergency response plan(s) for addressing safety and environmental issues; • contamination risk assessment; and • update and maintain site specific toolbox talks or advisory sheets relevant to the proposed scheme.
Ecological toolbox talk	All	Site induction	A toolbox talk, covering all ecological receptors and associated legal compliance, will be delivered to site personnel prior to works commencing.
Noise and vibration toolbox talk	All	Site induction	A toolbox talk, on best practice construction methods including those relating to noise and vibration control e.g. by employing techniques to keep site noise to a minimum, will be delivered to all site workers prior to working on the construction site.

Environmental Competencies

7.6 The Contractor shall ensure all personnel conducting environmental tasks are suitably qualified or experienced for the roles and responsibilities they are employed to undertake.

7.7 The Contractor will monitor and record that all staff have attended the relevant environmental induction or training as listed above (including updated or new training) prior to undertaking any activities on site. The Contractor is required to develop criteria for evaluating the effectiveness of any training.

8 References and Glossary

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Glossary

Aggregate	Materials used in construction, including sand, gravel, crushed stone, slag, or recycled crushed concrete.
Assessment	An umbrella term for description, analysis and evaluation.
Attenuation	Increase in duration of flow hydrograph with a consequent reduction in peak flow.
Baseline	The existing conditions which form the basis or start point of the environmental assessment.
Community	Assemblage of interacting populations that occupy a given area.
Conservation	Preservation or restoration of the natural environment and wildlife.
Contaminated land	Land in such condition by reason of substances on or under the land that significant harm is being caused, there is a significant possibility of such harm being caused or pollution of controlled water is being, or likely to be caused'.
Core Path	A right of way designated by a Local Authority as being of importance to maintain access and leisure provision.
Earthworks	Works created through the moving of quantities of soil or unformed rock.
Ecological Clerk of Works (ECoW)	A qualified ecologist who supervises construction sites, ensuring that ecological impacts are minimised and that the law relating to protected species etc. is complied with.
Ecology	The branch of biology concerned with the relations of organisms to one another and to their physical surroundings.
Effect	The result of change or changes on specific environmental resources or receptors.
Environmental Impact Assessment (EIA)	The process by which information about the environmental effects of a project is evaluated and mitigation measures are identified.
Environmental Impact Assessment Report (EIA Report)	Document provided by the Developer to the Competent Authority, containing environmental information required under Directive 2011/92/EU as amended by Directive 2014/52/EU.
Estuary	A partially enclosed coastal body of brackish water with one or more rivers or streams flowing into it, and with a free connection to the open sea.
Footprint	The geographical extent of an ecological impact.
Geomorphology	The branch of geology concerned with the structure, origin and development of topographical features of the earth's crust.

Ground Investigation	Exploratory investigation to determine the structure and characteristics of the ground. The collected information is used to establish or predict ground and groundwater behaviour during, and subsequent to, construction.
Groundwater	Water below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
Habitat	Term most accurately meaning the place in which a species lives, but also used to describe plant communities or agglomerations of plant communities.
Habitat Regulations Appraisal (HRA)	The process by which certain plans or projects are assessed which could affect the integrity of European sites. The report is used to inform an Appropriate Assessment (AA) under the requirements of the Habitats Directive.
Habitats Directive	EC Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora.
Holt	Deep underground otter shelter.
Hydrological	The exchange of water between the atmosphere, the land and the oceans.
Impact	Any changes attributable to the proposed scheme that have the potential to have environmental effects (i.e. the causes of the effects).
Intertidal	The area that is above water level at low tide and underwater at high tide.
Landscape	Human perception of the land, conditioned by knowledge and identity with a place.
Land-take	Acquired land which is necessary to construct the proposed scheme and associated infrastructure and to undertake the essential environmental mitigation measures.
Listed Building	Building included on the list of buildings of special architectural or historic interest and afforded statutory protection under the 'Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997' (as amended by the Historic Environment Scotland Ace 2014)' and other planning legislation. Classified categories A-C.
Made ground	Ground comprised of material deposited by man i.e. not natural.
Marine	Relating to or found in the sea.
Mitigation	Measure to avoid, reduce or offset potential adverse impacts.
Non-motorised users	Pedestrians, cyclists and equestrians.
Non-prime agricultural land	Agricultural land of Land Capability for Agriculture (LCA) classes 3.2 to 7.
Outfall	The place of discharge e.g. where a sewage pipe discharges into a river.

Peat	Brown to black organic material formed by the partial decomposition of vegetable matter in the wet acidic conditions of bog and fens.
Phase 1 Habitat Survey	This identifies the different habitats that are contained within or make up a site, and the key plant species for each of those habitat types.
Pile/Piling	A heavy stake or post made out of timber, steel, reinforced concrete or pre-tensioned concrete, driven into the ground to support foundations.
Planning Advice Note (PAN)	Document which disseminates good planning practice and provides more specific design advice of a practical nature.
Potential Impact	The impact on an aspect of the environment that may occur in the absence of mitigation.
Proposed scheme	The scheme design as reported in Chapter 3 of the EIA Report, and used as the basis for environmental assessment and reporting.
Ramsar sites	Internationally important wetland identified for conservation under the Ramsar Convention 1971.
Receptor	In this context, an element that is susceptible to being affected (either directly or indirectly) by the proposed scheme. Examples include habitats, species, people, properties, landscape, archaeological remains etc.
Residual Effects	Residual effect means the environmental effect after the provision of mitigation measures, if any.
Right of way	A public right of way is a defined route which has been used by the general public for at least 20 years and which links two public places (usually public roads).
Roost	Any resting site used by bats including maternity roosts which are used by females and their young, hibernacula which are used during winter hibernation and transitional roosts which may be used at any time.
Runoff	Water that flows over the ground surface to the drainage system. This occurs if the ground is impermeable or if permeable ground is saturated.
Salmonid	Pertaining or belonging to the family Salmonidae (salmon, trout and charr).
Saltmarsh	Coastal ecosystem in the upper coastal intertidal zone between land and open saltwater or brackish water that is regularly flooded by the tides.
Scheduled Monument (SM)	A monument which has been scheduled by the Scottish Ministers as being of national importance under the terms of the 'Ancient Monuments and Archaeological Areas Act 1979'.
Scottish Planning Policy (SPP)	A statement of Scottish Government policy on nationally important land use.
Scour	A depression or hole left when sediment is washed away from the bottom of a river.
Scrub	Vegetation dominated by locally native shrubs, usually less than 5m tall.

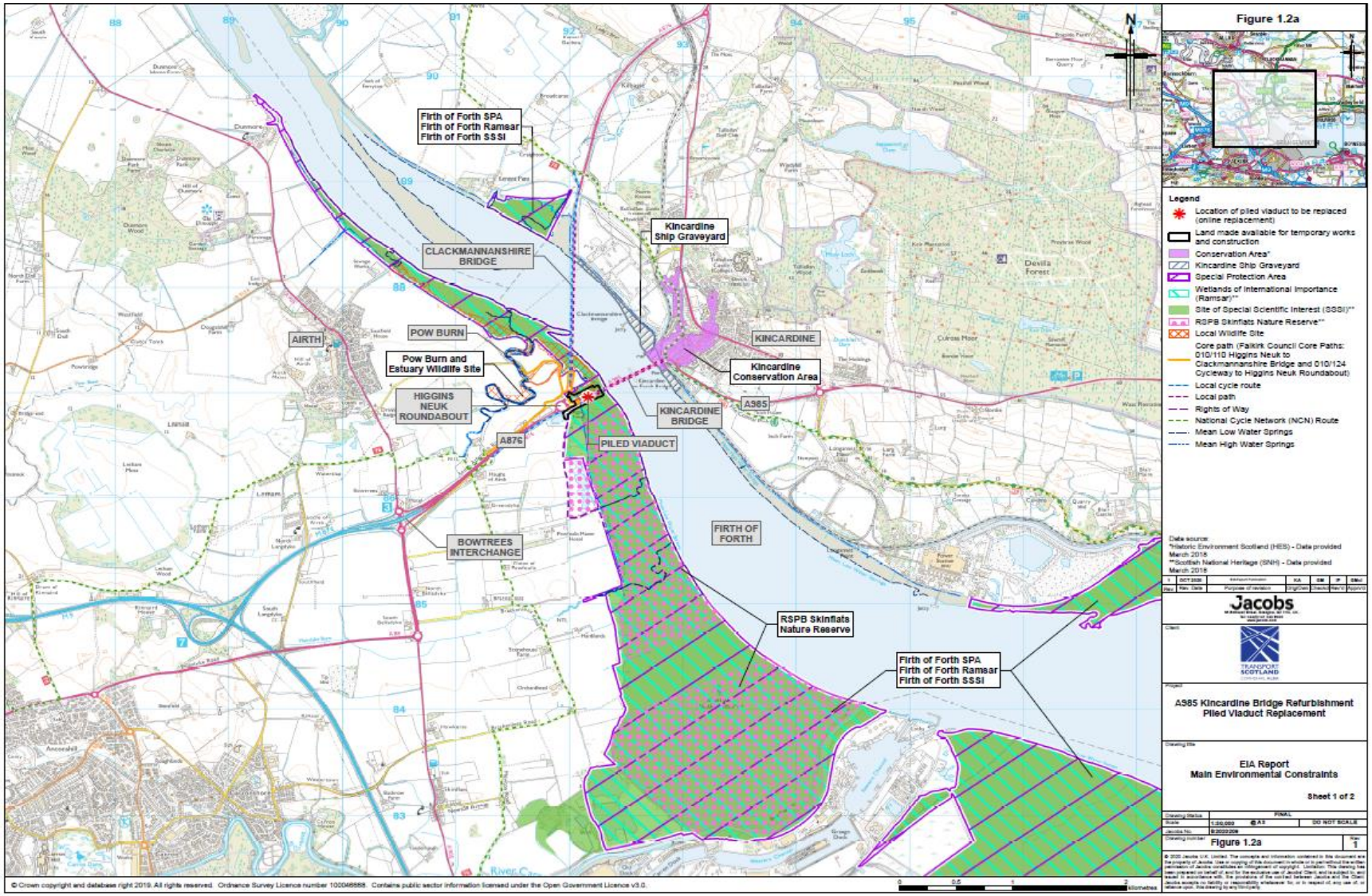
Sediment	Material carried in particles by water or wind and deposited on the land surface or seabed.
Sedimentation	The deposition or accumulation of sediment.
Site compound	A secure area close to the construction site white provides full site services including storage for equipment, materials and fuel, offices and amenity areas.
Sites of Special Scientific Interest (SSSI)	Designated areas of national importance. The aim of the SSSI network is to maintain an adequate representation of all natural and semi-natural habitats and native species in the UK. The site network is protected under the Nature Conservation (Scotland) Act 2004.
Special Area of Conservation (SAC)	An area designated under the EC Habitats Directive to ensure that rare, endangered or vulnerable habitats or species of community interest are either maintained at or restored to a favourable conservation status.
Special Protection Area (SPA)	Special Protection Areas (SPAs) are selected to protect one or more rare, threatened or vulnerable bird species listed in Annex I of the Birds Directive, and regularly occurring migratory species. These areas are designated under the Wild Birds Directive (Directive794/409/EEC).
Stakeholder	In this context, a person or group that has an interest in a project.
Susceptibility	The ability to accommodate change without adverse effect.
Sustainable Drainage Systems (SuDS)	A sequence of management practices and control structures designed to drain surface water in a more sustainable fashion than some conventional techniques.
Terrestrial	The environment above the Mean High Water Springs.
Viaduct	A bridge that carries a road, railroad etc. over a valley.
Water Framework Directive (WFD)	European environmental legislation (2000/60/EC) relating to inland surface waters, estuarine and coastal waters and groundwater. Fundamental objective to maintain "high status" of waters where it exists, preventing any deterioration in the existing status of waters and achieving at least "good status" in relation to all waters by 2015.
Water quality	The chemical and biological status of various parameters within the water column and their interactions, for example dissolved oxygen, indicator metals such as dissolved copper, or suspended solids (the movement of which is determined by hydrological process and forms geomorphological landforms).

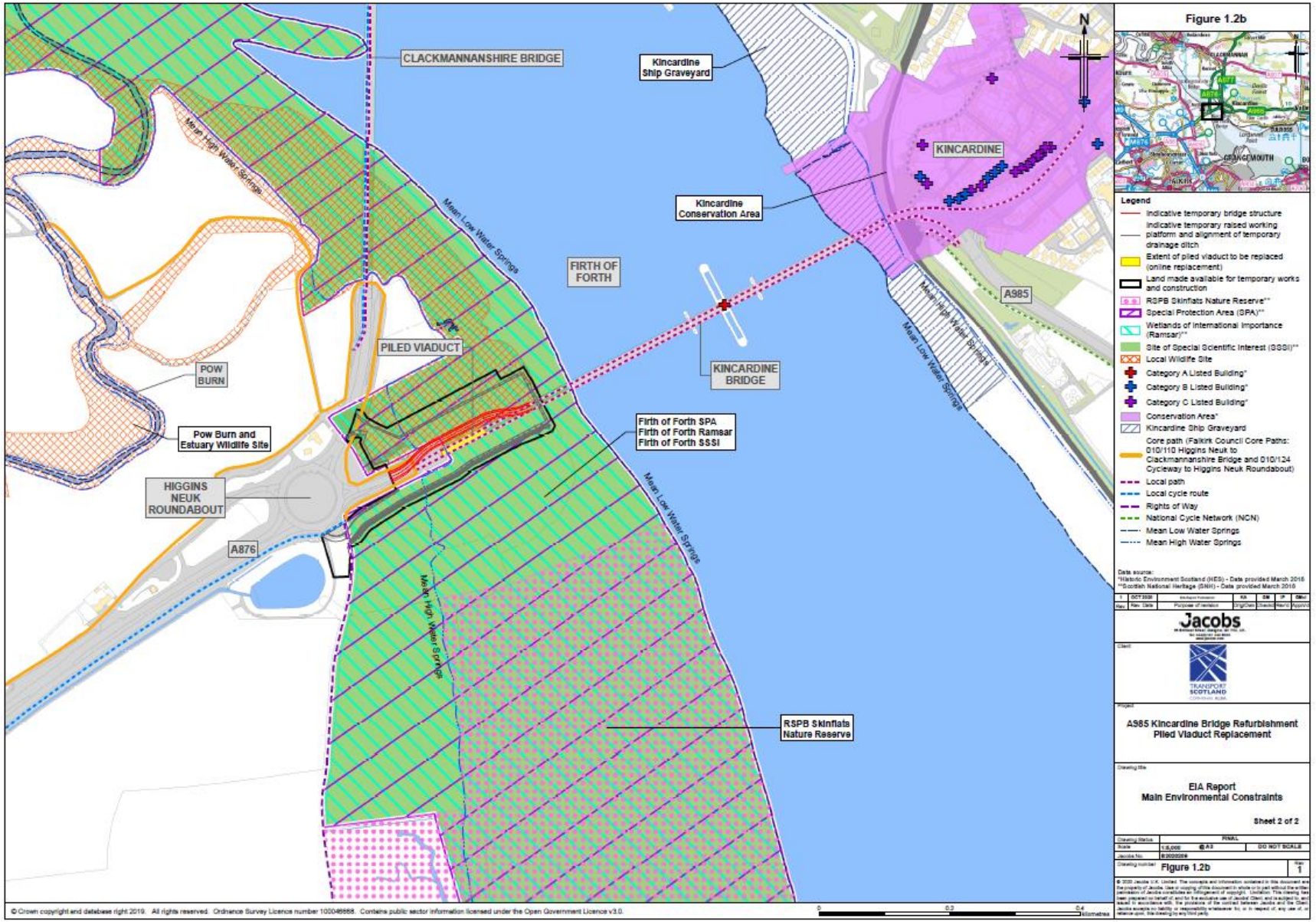
Appendix A: Additional Information

1.1 This appendix contains the following supporting information:

- Annex A: Key Environmental Constraints
- Annex B: Relevant Management Plans
- Annex C: Environmental Method Statements
- Annex D: Emergency Procedures and Record of Any Environmental Incidents
- Annex E: Copy of Evaluation of Change Register
- Annex F: Final Environmental Investigation and Monitoring Reports
- Annex G: Risk Register
- Annex H: Construction Programme

Annex A: Key Environmental Constraints




CLACKMANNANSHIRE BRIDGE
Kincardine Ship Graveyard
KINCARDINE
Kincardine Conservation Area
FIRTH OF FORTH
A985
PILED VIADUCT
KINCARDINE BRIDGE
POW BURN
Pow Burn and Estuary Wildlife Site
Firth of Forth SPA
Firth of Forth Ramsar
Firth of Forth SSSI
HIGGINS NEUK ROUNDABOUT
A876
RSPB Skinflats Nature Reserve
Mean High Water Springs
Mean Low Water Springs
N
Figure 1.2b
Legend
Indicative temporary bridge structure
Indicative temporary raised working platform and alignment of temporary drainage ditch
Extent of piled viaduct to be replaced (online replacement)
Land made available for temporary works and construction
RSPB Skinflats Nature Reserve**
Special Protection Area (SPA)**
Wetlands of International Importance (Ramsar)**
Site of Special Scientific Interest (SSSI)**
Local Wildlife Site
Category A Listed Building*
Category B Listed Building*
Category C Listed Building*
Conservation Area*
Kincardine Ship Graveyard
Core path (Falkirk Council Core Paths: 010/110 Higgins Neuk to Clackmannanshire Bridge and 010/124 Cycleway to Higgins Neuk Roundabout)
Local path
Local cycle route
Rights of Way
National Cycle Network (NCN)
Mean Low Water Springs
Mean High Water Springs
Jacobs
TRANSPORT SCOTLAND
A985 Kincardine Bridge Refurbishment
Piled Viaduct Replacement
EIA Report
Main Environmental Constraints
Sheet 2 of 2
FINAL
DO NOT SCALE
Figure 1.2b
1
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Annex B: Relevant Management Plans

1.1 As noted in Section 6.5, the Contractor will be required to produce environmental management plans including, but not limited to:

- Soil Management Plan;
- Flood and Tidal Response Plan;
- Pollution Prevention Plan (including a Pollution Incident Response Plan);
- Site Waste Management Plan;
- Site Restoration Plan;
- Dust Management Plan;
- Noise and Vibration Management Plan;
- Travel Management Plan;
- Construction Lighting Plan;
- Saltmarsh Management Plan;
- Ecological Management Plan (including Species Management Plans); and
- Quarterly Carbon Emissions Report.

1.2 This Annex should be updated with these management plans where available and appropriate.

1.3 As noted above in paragraph 1.1 and in Table 3, an ecological management plan (including species management plans) will need to be developed by the Contractor. Outline ecological management plans can be found in Appendices 8.2 (Outline Saltmarsh Management Plan) and 9.4 (Outline Ecological Management Plan) of the EIA Report.

[Note: Contractor to populate]

Annex C: Environmental Method Statements

1.1 Prior to construction, the Contractor will develop environmental method statements, as required. These will include, but not be limited to, the following:

- a Geology Method Statement; and
- a Lighting Method Statement.

1.2 Further information on the above method statements can be found in Table 3.1.

[Note: Contractor to populate]

Annex D: Emergency Procedures and Record of Any Environmental Incidents

1.1 In the event of an accidental release of hazardous materials, information regarding those materials, spill containment materials and spill response equipment shall be clearly stated on site. The Pollution Prevention Plan (as detailed in the ROEC) should be adhered to and updated at the time of any incidents.

1.2 All environmental incidents will be recorded on an incident report form.

1.3 Consultation will be taken with consultees, e.g. SNH and SEPA, as required.

1.4 Environmental incidents that require to be recorded include:

- spill of material to ground or watercourses;
- ecological incident, i.e. involving a protected species;
- discovery of unexpected contaminated land;
- large dust emission e.g. related to cement silo works; and
- plant/equipment leak.

1.5 Lessons learnt shall be fed back to site staff through safety and environmental briefings and used by the Contractor and the ECoW to amend procedures and update the CEMP accordingly.

1.6 Emergency procedures shall be tested routinely by the Contractor and results reported to the Project Manager.

[Note: Contractor to populate]

Annex E: Copy of Evaluation of Change Register

[Note: Contractor to populate]

Annex F: Final Environmental Investigation and Monitoring Reports

[Note: Contractor to populate]

Annex G: Risk Register

[Note: Contractor to populate]

Annex H: Construction Programme

[Note: Contractor to provide]