20. Schedule of Environmental Commitments

20.1 Introduction

20.1.1 The design of the Proposed Scheme has evolved taking account of environmental considerations throughout the design process in order to avoid or reduce potential environmental impacts where possible.

20.1.2 This chapter provides a summary of the additional environmental mitigation measures that have been described in each environmental topic chapter (Chapters 8 to 18), which will need to be part of the Proposed Scheme implementation. The Contractor will be required to carry forward to detailed design the mitigation measures outlined within this report.

20.2 Schedule of Environmental Commitments

20.2.1 Table 20-1 'Schedule of Environmental Commitments' below collates the specific mitigation commitments outlined in each environmental topic chapter for ease of reference and for use by those overseeing the relevant Contract Documents.

20.2.2 The Schedule of Environmental Mitigation table includes the following information:

- Mitigation reference number (derived from the environmental topic and mitigation item number);
- Description of the mitigation measure (including its purpose and location);
- Timing of the mitigation measure; and,
- Specific monitoring, consultation and approval required for the mitigation item.

Table 20-1 Schedule of Environmental Commitments

Mitigation Item	Location/ Approximate Chainage	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required	Potential Monitoring Requirements
General Standard Mitigation						
SM-1	Throughout Proposed Scheme	Pre-Construction and construction	The contractor for the Proposed Scheme should produce a Construction Environmental Management Plan (CEMP) prior to work on site, as requested by Scottish Environment Protection Agency (SEPA) in their consultation response. The CEMP should also include the mitigation measures included in this report where appropriate. The CEMP should highlight how the contractor will incorporate the principles of all proposed pollution prevention and mitigation for all elements of the construction process capable of giving rise to pollution. It should set out the principles of how waste should be minimised should be detailed and should demonstrate that: • Construction practices minimise the use of raw materials and maximise the use of secondary aggregates and recycled or renewable materials; and, • Waste material generated by the proposal is reduced and re-used or recycled where appropriate on site (for example in landscaping not resulting in excessive earth moulding and mounding). There may be opportunities to utilise surplus soils for sustainable purposes elsewhere.	To provide an overarching framework for the implementation of construction activities in accordance with the environmental commitments and mitigation measures within this Environmental Statement (ES). It should be developed in line with best practice guidance and seek to avoid, reduce or mitigate construction impacts on the environment and the surrounding community.	Consultation with the relevant local authorities, other statutory consultees including the SEPA. Approval by Transport Scotland (TS).	As described under topic specific mitigation
SM-2	Throughout Proposed Scheme	Pre-Construction and construction	SEPA produces a series of Pollution Prevention Guidelines (PPGs) (currently undergoing replacement by Guidance for Pollution Prevention (GPPs)) and the principles of any relevant PPGs/ GPPs should be incorporated into the CEMP. Particular attention should be paid to the following: • PPG 1: General guide to the prevention of pollution (or its replacement GPP when published); • GPP 5: Works and maintenance in or near water; and, • PPG 6: Working at construction and demolition sites (or its replacement GPP when published).		None Required	
	Throughout Proposed	Pre-Construction	An Environmental Clerk of Works (EnvCoW) should be appointed by the contractor.	Monitor the implementation of mitigation measure identified in the	Approval by TS	As relevant under specific topic

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	Scheme			ES and ensure that activities are carried out in such a manner as to prevent or reduce impacts on the environment.		commitments.
SM-3	Throughout Proposed Scheme	Pre-Construction & Construction	Access to/from residential, business, commercial and agricultural assets will be maintained throughout the construction period by means of signed diversions, where necessary. The estimated duration and location of these diversions will be communicated to affected parties a minimum of two weeks in advance before they are put in place.	To inform stakeholders throughout the construction period and maintain access to/from residential, commercial and industrial and agricultural, assets.	Local residents, businesses and landowners.	None Required
SM-4	Throughout Proposed Scheme	Construction & Operation/ Post-Construction	Existing access arrangements to any other land will not be prevented by the construction works during or post construction, unless alternative access is provided.	To maintain access to/from residential, commercial and agricultural land.	Local landowners where necessary.	None Required
SM-5	Throughout Proposed Scheme	Construction	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.	To ensure that site workers are aware of best practice construction methods, mitigation measures and how they are implemented	None Required	None Required
Chapter 8 - Landscape and Visual Effects						
LV-1	Throughout Proposed Scheme	Construction	The construction programme will be kept to the minimum practicable time to reduce the duration of any landscape and visual impacts and areas will be cleared for construction as close as possible to works commencing and top-soiling, reseeding and planting shall be undertaken as soon as possible after sections of work are complete. Phasing of construction to prevent consolidation of soil for example at Sustainable Drainage System (SuDS) basins/swales.	To reduce the duration of any landscape and visual impacts. Advance planting to ensure mitigation benefits are achieved sooner.	Programme and any advanced works should be agreed with TS	None Required
LV-2	Throughout Proposed Scheme	Pre-Construction/ Construction	Locations of construction compounds to be selected in order to minimise potential landscape and visual impacts by minimising area required, avoiding the loss of trees and hedgerows, and siting to avoid visibility from nearby residential properties	To reduce landscape and visual effects resulting from construction compounds	Siting of compounds to be agreed with TS	None required
LV-3	Throughout Proposed Scheme	Pre-Construction/ Construction	Woodland, tree and hedgerow planting to be planted on road embankments and along boundaries, and amenity planting to be incorporated alongside Non-Motorised User (NMU) routes. The detailed design will comply with the	To help minimise visual effect and help tie the scheme into the surrounding landscape. To unify the Proposed Scheme and	Detailed landscape design to be agreed and approved by TS.	Growth and quality of planting to be monitored for first 5 years.

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			Landscape Mitigation design as detailed in Figure 8.8 'Proposed Landscape Mitigation Measures'.	create high quality public realm/place making. To increase landscape and visual amenity and deliver increased biodiversity benefits.		
LV-4	Throughout Proposed Scheme	Pre-Construction/ Construction Design	Existing trees and hedgerows to be retained as far as possible and suitable protection put in place. A tree survey to BS: 5837 2012 and tree retention and protection plan shall be undertaken prior to construction to inform detail design.	Retain existing woodland and hedgerows, as far as possible. To help restrict the visual envelope and minimise the loss of landscape features.	Local Authorities and Scottish Natural Heritage (SNH) as necessary.	None required.
LV-5	Throughout Proposed Scheme	Pre-Construction/ Construction Design	Retain existing stone walls wherever possible. Where removal is necessary to facilitate construction and where the final scheme allows, rebuild stone walls using existing stone.	To minimise the loss of key landscape features.	None Required	A photographic record of existing stonewalls shall be undertaken and any section of removal of stone walls set aside for reuse/to be rebuilt.
LV-6	Throughout Proposed Scheme	Design	Minimise the need for road furniture elements, such as signs or barriers as far as practical, and where possible rationalise existing elements.	To minimise visual intrusion.	None Required	None Required.
LV-7	Throughout Proposed Scheme	Design and Construction	Where possible all embankments and cutting slopes should be 1:3 or less and graded out at the toe and rounded off at the top. Variable gradients should be introduced where possible to give a more natural appearance.	To integrate embankments and cutting into the surrounding landscape.	None Required	None Required.
LV-8	SuDS Features	Design and Construction	SuDS basins and features to be designed to reflect local landscape characteristics and appear natural. Hedgerows to be used as boundary rather than tall fencing, where possible.	To integrate drainage features into the surrounding landscape.	SEPA and Scottish Water	None Required
Chapter 9 - Nature Conservation						
NC-1	Throughout Proposed Scheme	Pre-construction/ Construction	Appointment of Ecological Clerk of Works (ECoW)	To carry out any required pre-construction surveys, monitor site ecology and provide any required ecological toolbox talks. To monitor implementation of ecological mitigation and compliance with legislation. To liaise with statutory bodies as necessary, including for protected	None required	The monitoring of site ecology/ ecology mitigation is within the ECoW remit

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				species licensing if pre-construction surveys and/or site monitoring dictate. Compliance with best practice.		
NC-2	Throughout Proposed Scheme	Construction	Excavations to have means of escape overnight (battered sides or exit ramp); open pipes to be capped overnight; construction lighting to be minimised and directional to minimise light spill on adjacent habitats.	Prevention of harm to wildlife by standard measures. Compliance with best practice.	None required	ECoW to verify implementation
NC-3	All retained trees/shrubs/woodland near Proposed Scheme	Construction	Adhere to guidance in *British Standard 5837:2012 Trees in relation to design, demolition and construction*	Prevention of damage to retained trees/shrubs by standard measures. Compliance with best practice.	None required	ECoW to verify implementation
NC-4	Throughout Proposed Scheme	Construction/ Operation	Planting of woodland, scattered trees, hedges and shrubs, the majority comprising a range of native species. Provided along verges, around SuDS ponds and along Dean Burn. Trees to be included along outer edges of A720 Edinburgh City Bypass ('the A720') verges.	Compensation of woody habitat loss; provision of greater quantities of woody habitat; floristic and general biodiversity enhancement. Encouragement of bats/barn owl to fly above A720 traffic height. Compliance with policy regarding biodiversity enhancement and compensation of tree/woodland loss.	None required	ECoW to verify implementation
NC-5	Verges, vicinity of SuDS ponds, margins of Dean Burn	Construction/ Operation	Sowing of MG5 meadow mix on verges and wider vicinity of SuDS ponds; sowing of marginal/wetland mixes around edges of SuDS ponds and Dean Burn	Floristic and general biodiversity enhancement, in addition to compensation of area of lost grassland. Compliance with policy regarding biodiversity enhancement.	None required	ECoW to verify implementation
NC-6	East end of Proposed Scheme	Construction/ Operation	Compensatory planting of native trees in vicinity of slight overlap with Dalkeith Estate Local Biodiversity Site (LBS) boundary	Compensation for any slight losses of immature trees within Dalkeith Estate LBS boundary. Compliance with policy regarding compensation of woodland loss.	Engagement with Dalkeith Estate advised if trees with the LBS are removed	ECoW to verify implementation
NC-7	SuDS ponds	Construction	SuDS ponds designed to retain water	Significant biodiversity gains including enhanced floristic, invertebrate, amphibian and bird diversity. Compliance with policy regarding biodiversity gains.	None required	ECoW to verify implementation
NC-8	Lugton Bogs	Construction	Compensatory expansion of pond to maintain	Compensate for 7.5% loss of pond	None required	ECoW to verify

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	Pond			area to scheme footprint. Compliance with best practice.		implementation
NC-9	Throughout Proposed Scheme and adjacent areas as necessary	Pre-construction	Pre-construction protected and invasive species surveys.	Update Stage 3 survey data which will be over two years old. SNH considered that updated survey data was not required for the Stage 3 assessment, and that pre-construction surveys would identify any changes to baseline conditions.	Derogation license(s) from SNH would be required if the pre-construction surveys identify new protected species refuges that will be impacted by the works.	ECoW to carry out and verify surveys completed
NC-10	Throughout Proposed Scheme	Construction	Standard breeding bird protection measures: a) clearance of vegetation outside breeding season (taken to be March-August inclusive); or, if clearance necessary in breeding season, b) checks carried out by ECoW to locate active bird nests and protect accordingly until completion of breeding attempts.	Prevention of harm to active bird nests. Compliance with legislation regarding nests of wild birds.	None required	ECoW to check and monitor vegetation to be cleared in breeding bird season
NC-11	Throughout Proposed Scheme where invasive non-native species are present	Pre-construction/ Construction	Prepare Invasive Non-Native Species Risk Assessment and Management Plan (INNS RAMP), taking into account pre-construction survey for invasive species (see above), with particular requirement to address locally abundant giant hogweed in the scheme footprint (especially along the Dean Burn). Incorporate measures in the INNS RAMP in the CEMP and method statements.	Prevention of spread of invasive species. Prevention of potential contamination of downstream river habitats and SSSI. Compliance with legislation, policy and best practice regarding invasive non-native species.	None required	ECoW to monitor site for invasives and supervise removal of contaminated material
NC-12	Throughout Proposed Scheme	Pre-construction/ Construction	Where habitat suitable for reptiles/amphibians will be cleared in period March-October inclusive, then guidance for minimising harm to reptile/amphibians to be followed, including strimming down in stages prior to clearance.	Minimising of potential injury to reptiles and amphibians. Compliance with legislation and/or best practice regarding reptiles and amphibians.	None required	ECoW to monitor such management if it is required
NC-13	Works in Dean Burn and Lugton Bogs Pond	Construction	Fish rescues during works within Dean Burn and Lugton Bogs Pond	Minimising of potential killing of any fish present in water features. Compliance with best practice.	None required	ECoW to verify implementation
NC-14	Dean Burn realignment	Construction	Realigned section of Dean Burn to be provided prior to removal of existing section, and to incorporate geomorphological enhancement to more natural condition.	Retention of continuous water corridor for otter and aquatic wildlife. Enhancement through provision of more natural channel section. Compliance with best practice and policy regarding wildlife protection and	None required	ECoW to verify implementation

Mitigation Item	Location/ Approximate Chainage	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required	Potential Monitoring Requirements
				biodiversity gain.		
NC-15	Dean Burn culverts	Construction	Otter fencing to be provided on either side of roads at Dean Burn crossings in accordance with Design Manual for Roads and Bridges (DMRB) guidance.	Deterrence of otters from crossing road rather than commuting through culverts. Compliance with best practice regarding wildlife protection.	None required	ECoW to verify implementation
NC-16	Summerside/ Sheriffhall	Construction/ Operation	A minimum of five tree sparrow boxes to be provided at Summerside and/or Sheriffhall on suitable trees	Enhancement through encouragement of a localised small bird species. Compliance with policy regarding biodiversity gain.	Approval of landowner(s)	ECoW to verify implementation
Chapter 10 - Cultural Heritage						
CH-1	Throughout Proposed Scheme	Design and Construction	Programme of evaluation, to include evaluation trenching, to inform mitigation strategy which may comprise excavation and/or archaeological watching brief. To be agreed with respective Council archaeologists. Mitigation within the City of Edinburgh Council (CEC) area should be informed by an initial phase of evaluation which may include a metal detector survey, followed by targeted evaluation trenches. Mitigation within the Midlothian Council (MLC) area would be informed by an initial phase of trial trench evaluation covering at least 5% of the impacted area. The following mitigation strategy might include full excavation, if archaeological remains were identified during evaluation, or archaeological monitoring during construction.	To mitigate any physical impacts on heritage assets resulting from the scheme.	CEC and MLC	Archaeological monitoring
CH-2	Throughout Proposed Scheme	Construction	A programme of historic building recording should be undertaken for any required partial demolition of the Stone Boundary Wall (002) and the Bridge over the Dean Burn (003).	To mitigate any physical impacts on heritage assets resulting from the scheme.	CEC and MLC	None
Chapter 11 - Road Drainage and the Water Environment						
RDWE-1	The Proposed Scheme	Detailed design & in advance of construction	The Water Environment (Controlled Activities) Regulations 2011 (CAR) (Scottish Government, 2011b) require licences to be sought for design and construction activities affecting watercourses, including engineering works (culverts and bridges) and discharges (outfalls, attenuation and treatment). The Contractor will be required to provide a detailed	Ensure compliance with regulatory requirements for the protection and effective management of the water environment	It is intended that the appointed Contractor be responsible for submitting applications and securing CAR authorisation based on their detailed design. The CAR application and surface	Regular monitoring to ensure effective implementation on site as per the granted licence.

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			Construction Method Statement which will include proposed mitigation measures for specific activities including any requirements identified through the pre-CAR consultation process. A surface water quality monitoring plan should develop site specific monitoring protocols during the construction phase and be includes as part of the CEMP and risk assessment methods statements.		water quality monitoring plan may require approval from SEPA	
RDWE-2	Proposed Works	During construction	The documents listed below provide key guidance on likely impacts on the water environment as a result of construction, and the methods for controlling impacts. The guidance given in these documents should be followed as closely as is practicable. • C648 'Control of Water Pollution from Linear Construction Projects' (CIRIA, 2006); • C532 'Control of water pollution from construction sites: guidance for consultants and contractors' (CIRIA, 2001); • SP156 'Control of water pollution from construction sites – guide to good practice' (CIRIA, 2002); and • 'Engineering in the Water Environment Good Practice Guide – Temporary Construction Methods' (SEPA, 2009a). Adherence by the contractor to the relevant GPPs/PGGS shall also be a requirement. Site works should be planned so that activities likely to generate silt-laden runoff are carried out during drier months (if possible), and erosion of surface soils is controlled. Seasonal weather patterns should be taken into consideration when programming and planning construction activities. A CEMP must include an Erosion Prevention and Sediment Control Plan and this must be submitted to SEPA prior to commencement of any works. Measures specified within shall include but not be limited to: • avoiding unnecessary stockpiling of materials and exposure of bare surfaces, limiting topsoil stripping to areas where bulk earthworks are immediately programme; • installation of temporary drainage systems/SuDS systems (or equivalent) including pre-earthworks	Minimise sediment mobilisation or release of pollutants into the adjacent watercourses, or risk of contamination to groundwater.	SEPA	Monitored on-site during construction to ensure effectiveness of measures. EnvCoW shall be required to have a good working understanding of these documents and effectively apply this knowledge onsite, providing an observational role in the event that if issues development that may present an unacceptable risk to the water environment, corrective action can be undertaken and reported as necessary.

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			drainage; • pre-earthworks drainage/SuDS with appropriate outfalls to be in place prior to any earthworks activities; • treatment facilities to be scheduled for construction early in the programme, to allow settlement and treatment of any pollutants contained in site runoff and to control the rate of flow before water is discharged into a receiving watercourse; • the adoption of silt fences, check dams, settlement lagoons, soakaways and other sediment trap structures as appropriate; • the maintenance and regrading of haulage route surfaces where issues are encountered with the breakdown of the existing surface and generation of fine sediment; • provision of wheel washes at appropriate locations (in terms of proposed construction activities) and >10m from water features; • protecting soil stockpiles using bunds, silt fencing and peripheral cut-off ditches, and location of stockpiles at distances >10m from water features; and • restoration of bare surfaces (seeding and planting) throughout the construction period as soon as possible after the work has been completed, or protecting exposed ground with geotextiles if to be left exposed			
RDWE-3	Dean Burn Realignment	During Construction	In relation to in-channel working, the Contractor will be required to adhere to GPPs/PPGS and other good practice guidance (as noted above), and implement appropriate measures which will include, but may not be limited to: • construction the new channel in the dry before any diversion to minimise the risk of sediment release; • undertaking in-channel works (i.e. when connecting the new channel to the Dean Burn) in low flow periods as far as reasonably practicable to reduce the potential for sediment release and scour; • no in-channel working during the salmonid spawning seasons unless permitted within any CAR licence. This is unlikely to be an issue with the Proposed	Provide enhancement of riparian habitat and hydromorphology conditions within the realigned Dean Burn channel.	Method statements for any in-channel working require approval by SEPA	Monitored on-site by the EnvCoW during construction, in particular when connecting the new channel to the Dean Burn in order to minimise the risk of sediment release and ensure that the hydromorphological conditions within the new channel meet the design requirements.

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			Scheme as the Dean Burn does not contain any fisheries interest; • minimise the length of channel disturbed and size of working corridor, with the use of silt fences or bunds where appropriate to prevent sediment being washed into the water feature; • limit the removal of vegetation from the riparian corridor and retaining vegetated buffer zone wherever reasonably practicable and • limit the amount of tracking adjacent to watercourses and avoid creation of new flow paths between exposed areas and new or existing channels.			
RDWE-4	Dean Burn Floodplain (south of the scheme)	Construction	A Flood Response Plan shall be prepared as part of the CEMP and will set out mitigation requirements when working within the functional floodplain. This would include: • routinely checking weather warnings; • monitoring river levels during periods of extreme rainfall to allow for effective and safe management of the site; • plant and materials being stored in areas outside the functional floodplain where practicable, with the aim for temporary construction works to be resistant or resilient to flooding impacts, to minimise/prevent movement or damage during potential flooding events. Where this is not possible, agreement will be required with the EnvCoW; • stockpiling of material within the functional floodplain, if unavoidable, will be carefully controlled with limits to the extent of stockpiling within an area, to prevent compartmentalisation of the floodplain, and stockpiles will be located >10m from watercourse bank; and • temporary drainage systems will be implemented to alleviate localised surface water flood risk and prevent obstruction of existing surface runoff pathways.	To minimise the risk of flooding impacts on construction works.	SEPA and Local Authorities as necessary.	Monitored on-site during construction by the EnvCoW (i.e. checking weather warnings and observing river levels)
RDWE-5	Proposed Works	During construction	Measures to minimise the risk and potential effects of spillage incidents shall typically include; storage of oils and diesel, along with the general maintenance and refuelling of plant, shall be restricted to impermeable bunded areas with a minimum 110% storage capacity and	To avoid spillages and reduce impacts on the water environment in relation to refuelling.	SEPA, Health and Safety Executive (HSE)	Monitored on-site during construction by the EnvCoW to ensures conformance with the measures identified to minimise the risk and

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			away from or where spillages could reach a surface water. All fuel, chemicals and oils shall be stored within bunded areas in accordance with GPP 2 and PPG 26 and be compliant with Water Environment (Controlled Activities) (Scotland) Regulations 2011 [as amended]. The storage compound shall be fenced off and locked when not in use to prevent theft and vandalism. Refuelling of plant and machinery shall take place at least 10m away from watercourses and spill kits and oil absorbent material must be carried by mobile plant and located at vulnerable locations (e.g. crossings of land drains and ditches). Care must be taken whilst using shuttering oils when preparing formwork. An Emergency Response Plan shall be prepared. Concrete mixing must be undertaken in designated impermeable areas, at least 10m away from a watercourse or surface water drain to reduce the risk of runoff entering a watercourse, or the sub-surface, or groundwater environment. Equipment, batching and ready mix lorry washing and cleaning should be washed out on site into a designated area that has been designed to contain wet concrete/wash waters (see PPG 6).			potential effects of spillage incidents
RDWE-6	Proposed Works	During construction	Sewage from site facilities will be disposed of appropriately either to a foul sewer (with the permission of Scottish Water) or via appropriate treatment (i.e. transported offsite for disposal at a Sewage Treatment Works (STW).	To ensure sewage from site facilities is disposed of appropriately.	Permission required from Scottish Water for disposal to foul sewer or SEPA, in advance of construction, for appropriate treatment and discharge to a watercourse	-
RDWE-7	Proposed Works	Before construction	Dewatering activities should require groundwater discharges to be directed into settlement lagoons, to reduce the suspended solids concentration, before subsequent discharge to surface watercourses.	To prevent pollution of watercourses and groundwater from construction activities	SEPA	Monitored on-site during construction to ensure effectiveness of measures
RDWE-8	Proposed Scheme	Construction & Operation	Controlling grout run-off on the ground surface and prevent grout reaching agricultural soils, watercourses or causing contamination of groundwater. Care should also be taken to prevent the grout extending past the target zone. This may be controlled by measures such as the use of gravel to form curtain walls to the grout. If practicable, large voids should also be filled with	To prevent pollution of watercourses and groundwater from construction activities	SEPA	Monitored on-site during construction to ensure effectiveness of measures

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			permeable granular materials, such as gravel, to allow some groundwater flow to remain and minimise hydraulic obstruction. This will include identifying any potential mine water discharges via a water features survey prior to construction and a visual monitoring assessment to observe for areas of seepage of migrated contaminated groundwater from grouting activities. A programme of regular groundwater level and quality monitoring should be established and implemented prior to the commencement of any construction works. Monitoring for potential impacts, including groundwater level and quality monitoring in both the superficial and bedrock aquifers, and surface water discharges, will allow for timely maintenance, remediation and restoration to minimise potential direct and indirect impacts. This is especially important before and during grouting operations to observe for any adverse effects on groundwater. Guidance from the Coal Authority and SEPA including Stabilising mine workings with PFA grouts. Environmental code of practice 2nd Edition, BRE Report 509, should be adopted throughout the design and construction process to minimise impacts on groundwater during these operations			
RDWE-9	Proposed Works	During construction	All piles should be installed in accordance with SEPA methodology. This is of particular importance where the proposed piles terminate below the groundwater level in the bedrock. Where the piles terminate above the groundwater level in the bedrock, there will be no impacts on bedrock groundwater flow or negligible impacts on bedrock groundwater quality. A piling risk assessment may be required.	To prevent pollution of watercourses and groundwater from construction activities	SEPA	Monitored on-site during construction to ensure effectiveness of measures
Chapter 12 - Noise and Vibration						
NV-1	Throughout Proposed Scheme	Pre-Construction & Construction	The contractor would be required to develop and implement a Noise and Vibration Management Plan to minimise noise and vibration during the works.	To predict the noise and vibration levels during the construction of the proposed scheme. It would include the design of receptor specific mitigation, such as solid site hoarding, over and above the standard 'Best Practicable Means' (BPM) mitigation detailed in the Noise and Vibration Management Plan, where required.	CEC and MLC	-

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NV-2	Throughout Proposed Scheme	Pre-Construction & Construction	As part of the Noise and Vibration Management Plan a scheme of noise and vibration monitoring including suitable trigger criteria and details of subsequent actions would be agreed by the contractor with the Environmental Health Officers of CEC and MKLC	To determine compliance with agreed noise and vibration criteria and identify any additional mitigation requirements.	CEC and MLC	Noise and/or vibration monitoring during construction
NV-3	Throughout Proposed Scheme	Pre-Construction & Construction	As part of the Noise and Vibration Management Plan BPM would be used by the contactor to limit the level of noise/vibration to which operators and receptors in the vicinity of site operations would be exposed. This includes the following: • compliance with standard daytime working hours for the majority of the works, to be agreed with CEC and MLC; • agreement in advance with CEC and MLC for works outside of normal daytime working hours; • optimal location of equipment on site to minimise noise disturbance; • control of noise and vibration at source through the choice of low vibration/quiet working methods and plant; • proper use of plant with respect to minimising noise and vibration emissions in line with plant manuals and completion of regular maintenance; • fitting vehicles and mechanical plant with effective exhaust silencers which would be maintained in good, efficient working order; • use of 'sound reduced' compressors fitted with properly lined and sealed acoustic covers which would be kept closed whenever the machines are in use; • use of ancillary pneumatic percussive tools fitted with mufflers or silencers of the type recommended by the manufacturers; • shut down or throttling down to a minimum; • machines in intermittent use in the intervening periods between work; • positioning of all ancillary plant such as generators, compressors and pumps so as to cause minimum noise disturbance. If necessary, acoustic barriers or enclosures would be provided; • adherence to the codes of practice for construction	To reduce, as far as practicable, the level of noise and vibration to which operators and sensitive receptors in the vicinity of site operations would be exposed.	CEC and MLC	Surveys and inspections during construction to monitor implementation of BPM

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			working and piling given in British Standard 'BS 5228:2009+A1:2014' and the guidance given therein on minimising noise and vibration emissions; • implementation of a noise insulation and temporary re-housing policy; • provision of acoustic enclosures around static plant, where necessary; and • use of less intrusive alarms, such as broadband vehicle reversing warnings.			
NV-4	Throughout Proposed Scheme	Pre-Construction & Construction	Implementation of a communications strategy by the contractor for the Scheme and appointment of a Community Liaison Officer.	To ensure residents are kept informed	None Required	-
NV-5	Throughout Proposed Scheme	Operation	Use of low noise surfacing on the A720 mainline and sliproads within the scheme extents.	Reduce traffic noise impacts at nearby sensitive receptors	None Required	-
Chapter 13 - Air Quality						
AQ-1	Throughout the Proposed Scheme	Pre-Construction & Construction	The following construction mitigation measures should be implemented through a site-specific CEMP: • Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. • Display the head or regional office contact information. • Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner and record the measures taken. • Make the complaints log available to the local authority when asked. • Record any exceptional incidents that cause dust and/or air emissions, either on or off site and the action taken to resolve the situation in the log book. • Undertake daily on-site and off-site inspections, where receptors (including roads) are nearby, to monitor dust, record inspection results and make the log available to the local authority when asked. • Carry out regular site inspections, record inspection results and make an inspection log available to the	Reduce the production and/or dispersal of dust during construction to lessen the nuisance and limit the human health impacts	Consultation with the relevant local authorities, other statutory bodies and regulatory authorities.	• Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner and record the measures taken. • Make the complaints log available to the local authority when asked. • Record any exceptional incidents that cause dust and/or air emissions, either on or off site and the action taken to resolve the situation in the log book. • Undertake daily on-site and off-site

Mitigation Item	Location/ Approximate Chainage	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required	Potential Monitoring Requirements
			local authority when asked. • Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions. • Plan site layout so that machinery and dust causing activities are located away from receptors as far as possible. • Erect solid screens or barriers around dusty activities that are at least as high as any stockpiles on site. • Remove materials that have a potential to produce dust from site as soon as possible unless being re-used on site. • Cover, seed or fence stockpiles to prevent wind whipping. • Ensure all vehicles switch off engines when stationary – no idling vehicles. • Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable. • Impose and signpost a maximum speed limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work area. • Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays. • Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation • Use enclosed chutes and conveyors and covered skips • Minimise drop heights • Avoid bonfires and burning of waste materials • Re-vegetate earthworks and exposed areas/ soil stockpiles to stabilise surfaces as soon as practicable. • Use Hessian or mulches where it is not possible to re-vegetate or cover the topsoil as soon as practicable. • Only remove the cover in small areas during work and not all at once.			inspections, where receptors (including roads) are nearby, to monitor dust, record inspection results and make the log available to the local authority when asked. • Carry out regular site inspections, record inspection results and make an inspection log available to the local authority when asked. • Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.

Mitigation Item	Location/ Approximate Chainage	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required	Potential Monitoring Requirements
			• Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out • Use water assisted dust sweeper(s) on the access and local roads, to remove, as necessary any material tracked out of the site. • Avoid dry sweeping of large areas. • Ensure vehicles entering and leaving the site are covered to prevent escape of materials during transport. • Implement a wheel washing system.			
Chapter 14 - Effects on All Travellers						
AT-1	Throughout Proposed Scheme	Pre-Construction & Construction	Formulation and implementation of a CEMP which will maintain NMU access through Sheriffhall Roundabout at all times during the construction programme where possible to avoid temporary NMU route severance and reduce disruption to NMUs.	To reduce disruption to NMU route journeys through, and around, Sheriffhall and avoid temporary NMU route severance (including the A6106 south NMU access to Dalkeith Country Park).	Any required temporary diversion due to construction needs would be agreed in advance with CEC or MLC as appropriate, (and TS) with advance diversionary signage provided.	TS approval of the CEMP prior to implementation. Contractor recording and reporting of the CEMP implementation (including to TS).
AT-2	A7 north (Campend & Summerside bus stops)	Pre-Construction & Construction	Provision of temporary alternative bus stop locations in the baseline vicinity required during the proposed Scheme construction to maintain scheduled local bus services provision along the A7 north.	To maintain scheduled bus stop provision along the A7 North in the vicinity of the baseline Campend and Summerside bus stop locations.	Pre-Construction & Construction consultations with affected bus operators (Lothian Buses, Borders Buses and Lothian Community Transport Services).	Contractor recording and reporting of the affected bus operator consultations (including to TS).
AT-3	Borders Railway	Pre-Construction & Construction	The Proposed Scheme construction works in relation to the extension of the existing A720 Borders Railway underbridge (to accommodate the two new A720 slip roads east of Sheriffhall) requires mitigation to minimise potential disturbance to the service operation of the Borders Railway.	To minimise disruption to Borders Railway scheduled passenger services (weekdays and weekends).	Pre-Construction & Construction consultations with Network Rail and the ScotRail to agree working methods e.g. overnight/ weekend line possessions to minimise temporary disruption to the Borders Railway timetable.	Contractor recording and reporting of the Network Rail and ScotRail consultations (including to TS).
AT-4	Throughout Proposed Scheme	Pre-Construction & Construction	The use of temporary traffic management measures defined in the CEMP aims to minimise Driver Stress (e.g. frustration, fear of potential accidents and route uncertainty) whilst traversing the A720 Sheriffhall Roundabout location during the Proposed Scheme	To minimise Driver Stress whilst traversing the A720 Sheriffhall Roundabout location during the Proposed Scheme construction phase.	None required.	TS approval of the CEMP prior to implementation. Contractor recording and reporting of the CEMP

Mitigation Item	Location/ Approximate Chainage	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required	Potential Monitoring Requirements
			construction phase.			implementation (including to TS).
AT-5	Throughout Proposed Scheme	Pre-Construction & Construction	The implementation of best practice construction measures including the preparation and implementation of the CEMP to reduce/offset adverse Amenity Change impacts (*relating to the relative pleasantness of a journey for NMUs and views from the road for Vehicle Travellers*) during construction of the Proposed Scheme.	To reduce/offset adverse Amenity Change impacts (relating to the relative pleasantness of a journey for NMUs and views from the road for vehicle travellers) during construction of the Proposed Scheme.	None required.	TS approval of the CEMP prior to implementation. Contractor recording and reporting of the CEMP implementation (including to TS).
AT-6	Throughout Proposed Scheme	Operation	The Proposed Scheme design provides safer, segregated off-road provision for NMUs with crossings below both the A720 and the roundabout as embedded mitigation. It also provides new safer, segregated off-road shared provision for NMUs along the A7 South and improved off-road shared provision for NMUs along the A7 North, the A6106 North and the A6106 South.	To provide enhanced, segregated (off-road) and safer NMU journeys through and around Sheriffhall - avoiding at-grade crossings.	None required.	None required.
AT-7	A7 north (Campend & Summerside bus stops)	Operation	The Proposed Scheme operation should restore the two baseline bus stop locations on the A7 North (at Summerside and Campend).	To maintain the baseline A7 bus stops at Summerside and Campend.	None required.	None required.
AT-8	Throughout Proposed Scheme	Operation	Once operational, the Proposed Scheme will promote reduction in Driver Stress (e.g. frustration, fear of potential accidents and route uncertainty) A720 traffic will be free flowing by the removal of traffic light-controlled junction and its replacement by a grade separation arrangement at Sheriffhall. Local traffic (A7 and A6106) should also flow more freely with the removal of signal-controlled junctions reducing delays and the potential for frustration. The Proposed Scheme operation will provide enhanced safety benefits for users of the A720 as access will be via slip roads and all junctions will be designed to improve alignment and visibility.	To reduce Driver Stress by improving vehicle traffic flows, reducing congestion, and creating safer vehicle movements through and around Sheriffhall.	None required.	None required.
Chapter 15 - Community and Private Assets, and Human Health						
CPA-1	Throughout the Proposed Scheme	Pre-Construction	Secure agreement for temporary and permanent land take of agricultural, woodland, Allocated Development and Network Rail land assets to allow the Proposed Scheme construction and operation. Undertake pre-construction drainage surveys where necessary to reduce the likelihood of damage or	To secure (via affected landowner/tenant consultations) land take agreements necessary to allow the Proposed Scheme construction and operation.	Pre-Construction & Construction consultations with all affected landowners/tenants. Where necessary provide appropriate financial	Contractor recording and reporting of the affected landowner/tenant consultations – including agreed compensation events.

Mitigation Item	Location/ Approximate Chainage	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required	Potential Monitoring Requirements
			disruption.		compensation –and compensatory planting in the case of affected woodland area.	Approval(s) as required from TS.
CPA-2	Throughout Proposed Scheme	Pre-Construction & Construction	Access to/from residential, business, agricultural, and community assets will be maintained throughout the construction period by means of agreed construction methods (including temporary access diversions) where necessary. Temporary access changes, timings and their estimated duration will be discussed with affected landowners/tenants' pre-construction and confirmed in advance before they are put in place. Details should be proposed within the contractor's CEMP and Traffic Management Plan	To maintain access to/from residential, business, agricultural, and community assets during the Proposed Scheme construction period.	Pre-Construction & Construction consultations with all affected landowners/tenants.	Contractor recording and reporting of the affected landowner/tenant consultations (including to TS).
CPA -3	The Royal Infirmary Edinburgh (RIE) and Spire Shawfair Park Hospital	Pre-Construction & Construction	Consultations to be undertaken with the RIE and Spire Shawfair Park to inform them of the Proposed Scheme construction programming and to allow both hospitals to plan alternative, advisory routes for staff (including ambulance drivers) and patients if necessary. Details should be proposed within the contractor's CEMP and Traffic Management Plan	To minimise potential journey disruption (including ambulances) for those to whom the Sheriffhall Roundabout and the A7 North provide their most convenient route access option.	Pre-Construction and Construction consultations to be undertaken with the Spire Shawfair Park and RIE.	Contractor recording and reporting of these consultations (including to TS).
CPA-4	Throughout the Proposed Scheme	Pre-Construction	Drainage surveys will be undertaken to reduce the likelihood of disturbance to field and forestry drainage systems during construction.	To minimise potential impacts on field drainages.	Pre-Construction consultations with all affected landowners/tenants.	Contractor recording and reporting of the affected landowner/tenant consultations
Chapter 16 - Geology and Soils						
GS-1	Areas with identified contaminated land	Pre-Construction	Consultation to take place with SEPA and local authorities regarding the planned works in relation to land affected by contamination.	To reduce risk from contamination on site.	SEPA & Local Authorities	None required.
GS-2	Areas with identified contaminated land	Pre-Construction	Further investigation will be undertaken in areas identified as potentially affected by contamination (as part of earthworks screening). Information will be obtained to characterise the extent and type of contamination present and allow mitigation measures to be developed/put in place.	To identify and characterise potential contamination and to develop appropriate mitigation methods.	None required.	Contractor recording and reporting.
GS-3	Throughout the Proposed Scheme	Construction and Post-Construction	Risks to the construction and maintenance workers from potential contaminants including unrecorded contaminants, to be identified and mitigation measures put	To identify and characterise potential contamination with respect to workers and to develop appropriate mitigation	None required.	Contractor recording and reporting.

Mitigation Item	Location/ Approximate Chainage	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required	Potential Monitoring Requirements
			in place.	methods.		
GS-4	Borehole locations throughout Proposed Scheme	Pre-Construction, Construction and Post-Construction	Further monitoring of boreholes will be undertaken where a risk from ground gases to site/maintenance workers, structures or adjacent site users has been identified. Procedures will be designed to ensure safe working practices are employed. Further risk assessment will be carried out where a post-construction gas risk has been identified and, if appropriate, mitigation measures are included in the design.	To identify and characterise potential ground gas risks with respect to workers and adjacent site users and to develop appropriate mitigation methods.	None required.	Contractor recording and reporting.
GS-5	At structures throughout the scheme	Construction	Piling into bedrock shall be in accordance with SEPA requirements outlined in the Groundwater Protection Policy (SEPA, November 2009)	To mitigate against impacts of piling on bedrock groundwater flow and quality	SEPA	None required.
GS-6	Throughout the Proposed Scheme	Pre-Construction & Construction	Comply with SEPA relevant to stabilising mine workings and mine entries including 'Stabilising mine workings with PFA grouts. Environmental code of practice 2nd Edition, BRE Report 509' and the SEPA requirement that an appropriate risk assessment for the proposed stabilisation of mine workings with PFA grout shall be produced prior to this activity being undertaken on site.	To mitigate against impacts of grout (used to infill mine workings and mine entries) on groundwater quality.	SEPA	None required.
GS-7	Throughout the Proposed Scheme	Pre-Construction & Construction	Consult with The Coal Authority prior to all mine workings and mine entry treatment works	To mitigate against impact on other coal seam resources.	The Coal Authority	None required.
GS-8	Throughout the Proposed Scheme	Pre-Construction & Construction	SEPA's local team should be notified when the grouting works start, what works are involved and what watercourse/ditches they may affect. SUDS should be in place prior to any soil removal for the construction phase.	To mitigate against potential impacts on water quality resulting from mine workings treatment.	SEPA	None required.
GS-9	Throughout the Proposed Scheme	Pre-Construction & Construction	Implement measures to: control grout run-off on the ground surface and prevent grout reaching agricultural soils, watercourses or causing contamination of groundwater; prevent grout leaks below ground into mine workings or mine entries; and control mine gases and mine waters which may be contaminated. Preventing the grout extending past the target zone, which may be controlled by measures such as the use of gravel to form curtain walls to the grout; identifying any potential mine water discharges via a water features survey prior to construction and a visual monitoring	To mitigate against grouting works impacting on geology and soils receptors, including hydrogeology	None required	None required.
GS-10	Throughout the Proposed	Construction	Minimisation of erosion by programming soil strips to consider weather conditions; use of appropriate temporary	To mitigate against impact of construction works on superficial	None required	None required.

Mitigation Item	Location/ Approximate Chainage	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required	Potential Monitoring Requirements
	Scheme		works including temporary dewatering as required to ensure stability of excavations and limit localised failures and soil loss; limiting haulage routes; positioning stockpiles to minimise disturbance to soils and run-off of sediments; careful consideration of temporary compound; reinstatement on completion of construction. Adherence to the CEMP. Compliance with best practise guidance including: Sustainable Use of Soil on Construction Sites (DEFRA, 2009) Good Practice for Handling Soils (MAFF, 2000)	deposits and agricultural soils		
GS-11	Throughout the Scheme	Pre-Construction and Construction	Prior to the commencement of below-ground construction, the current groundwater quality should be established. Thereafter a programme of regular groundwater level and quality monitoring should be established and implemented prior to the commencement of any construction	To monitor groundwater during works	None required	None required.
GS-12	Throughout the Scheme	Pre-Construction and Construction	A CEMP should be prepared which should follow SEPA environmental guidance. Construction measures to be in line with SEPA guidance including: PPG 1 – Understanding Your Environmental Responsibilities -Good Environmental Practises (withdrawn but is still considered good practise), 2013 GPP 5 - Works and Maintenance in or Near Water, 2017 PPG 6 – Working at Construction and Demolition Sites (withdrawn but is still considered good practise), 2012	Minimise the potential for fuel or other contaminant leakage	SEPA	None required.
GS-13	At structures or other areas of piling	Construction	Standard controls and best practice to be employed during construction including the use of appropriate drilling methods, site supervision and ongoing monitoring of the works.	Minimise unnecessary disturbance to bedrock	None required	None required.
GS-14	Throughout the Proposed Scheme	Operation	Prescribed criterial and monitoring to allow exploitation of resource whilst protecting the scheme	Mitigate against sterilisation of resource	None	None required.
Chapter 17 – Material Assets and Waste						
M-1	Throughout Proposed Scheme	Pre-Construction & Construction	The Contractor will implement Zero Waste Scotland's Design for Resource Efficient Construction Principles to reduce the total material demand of the design and enable the reduction, reuse and recycling of waste.	To use materials most efficiently throughout the Proposed Scheme.	None required.	None required.
M-2	Throughout	Pre-	Prior to construction a Materials and Waste Management	To set out how all materials and waste	None required.	TS approval of the

Mitigation Item	Location/ Approximate Chainage	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required	Potential Monitoring Requirements
	Proposed Scheme	Construction & Construction	Strategy (M&WMS) for both material procurement and waste management should be devised, including a Site Waste Management Plan (SWMP). These documents form part of the CEMP. The M&WMS sets out how all construction phase materials will be managed and identify opportunities to substitute recycled or secondary materials/products for those using virgin materials. It will be updated regularly during the construction of the Proposed Scheme.	will be managed.		M&WMS prior to implementation. Contractor recording and reporting of the M&WMS implementation (including toTS).
M-3	Throughout Proposed Scheme	Pre-Construction & Construction	Alternatives to primary aggregates will be investigated, including opportunities to use recycled or secondary aggregates in the construction of the Proposed Scheme; either sourced from construction and excavation waste obtained onsite or offsite; or secondary aggregates obtained from an alternative source.	To reduce impacts associated with the extraction, manufacture and transport of materials and to reduce waste generation, maximise re-use of site-won materials on-site and reduce the need for disposal of waste.	None required.	None required.
M-4	Throughout Proposed Scheme	Pre-Construction & Construction	Where feasible, key materials, such as aggregates, asphalt, cement, concrete and steel used within the Proposed Scheme shall be responsibly sourced from suppliers who have a minimum ISO 14001 certification and, if available, BES 6001 (Framework Standard for the Responsible Sourcing of Construction Products) certification for the material.	To reduce impacts associated with the extraction and manufacture of materials.	None required.	None required.
M-5	Throughout Proposed Scheme	Pre-Construction & Construction	The SWMP will identify the types and likely quantities of wastes that may be generated, and it will set out, in an auditable manner, how waste will be reduced, re-used, managed and disposed of in accordance with relevant Zero Waste Scotland guidance.	To set out how all construction wastes will be managed.	Consultation with SEPA.	TS approval of the SWMP prior to implementation. Contractor recording and reporting of the SWMP implementation (including to TS).
M-6	Throughout Proposed Scheme	Pre-Construction & Construction	The Contractor will apply the principles of the 'waste hierarchy' (prevention, preparing for re-use, recycling, other recovery, disposal) to minimise waste generation, maximise re-use of site-won materials on-site and minimise the need for disposal of waste. Where re-use is not possible within the Proposed Scheme, alternative re-use and recycling options will be sought offsite with disposal the final option.	To reduce waste generation, maximise re-use of site-won materials on-site and reduce the need for disposal of waste.	None required.	None required.
M-7	Throughout Proposed Scheme	Pre-Construction & Construction	Any hazardous and contaminated soils encountered during the construction works should undergo further investigation, testing and risk assessment to determine opportunities for the most appropriate waste management options. Depending on the contamination profile of the	To reduce waste generated from the Proposed Scheme.	Consultation with SEPA.	Recording of any contaminated land encountered, and relevant investigation,

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			materials there are remediation technologies available, such as soil washing, which can be applied to make the materials suitable for reuse.			testing and risk assessments carried out.
Chapter 18 - Climate Change						
CC-1	Throughout Proposed Scheme	Construction	Where feasible, carrying out measures to reduce Greenhouse Gas (GHG) emissions from material use and waste, including: • The sustainable reuse of soil and aggregate materials won from excavation; • The reuse, where possible of materials and waste generated from construction works; • The use of materials with lower embodied carbon, such as those with a higher recycled content; • Procuring locally sourced materials where reasonably practicable; and • Careful consideration of material quantity requirements to avoid over-ordering and generation of waste materials, while also reducing transportation-related emissions.	To reduce GHG emissions from material use and waste.	None required.	None required.
CC-2	Throughout Proposed Scheme	Construction	The appointed contractor will develop and implement a plan to reduce energy consumption and GHG emissions throughout construction, including, for example: • Monitoring of fuel use on site; • Training of plant operatives in fuel efficient driving techniques; and • Consideration of renewable/ and or low carbon energy sources.	To reduce GHG emissions from energy and fuel use during construction.	None required.	None required.
CC-3	Throughout Proposed Scheme	Construction	Consideration of the dangers associated with working in more extreme weather conditions within the CEMP.	To reduce the vulnerability of workers to climate change risks.	None required.	None required.
CC-4	Throughout Proposed Scheme	Operation	Consideration of the use of construction materials with superior properties (such as increased tolerance to fluctuating temperatures) to be included within detailed designs.	To reduce the vulnerability of the Proposed Scheme to climate change risks.	None required.	None required.
CC-5	Throughout Proposed Scheme	Operation	Consideration of climate change projections within maintenance plans and drainage systems to protect against a return period of 1-in-100 years flood event.	To reduce the vulnerability of the Proposed Scheme to flooding.	None required.	None required.

Mitigation Item	Location/ Approximate Chainage	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required	Potential Monitoring Requirements
CC-6	Throughout Proposed Scheme	Operation	Inclusion of flood compensation areas and compensatory floodplain within the design to account for future climate change.	To reduce the vulnerability of the Proposed Scheme to flooding.	None required.	None required.
CC-7	Throughout Proposed Scheme	Operation	Application of engineering design standards for safety of road users and structural stability.	To reduce the vulnerability of the Proposed Scheme to climate change risks.	None required.	None required.
CC-8	Throughout Proposed Scheme	Operation	Regular maintenance of assets.	To reduce the vulnerability of the Proposed Scheme to climate change risks.	None required.	None required.
CC-9	Throughout Proposed Scheme	Operation	Procedures in place for severe weather events including: • Identification of suitable network redundancies and diversion routes; • Emergency response and contingency plans; and • Standard operating procedures for use in the event of necessary road closure and/or traffic diversion.	To reduce the vulnerability of the Proposed Scheme to climate change risks.	None required.	None required.