21 Schedule of Environmental Commitments

21.1 Introduction

21.1.1 This Schedule of Environmental Commitments presents the mitigation measures identified throughout **Chapters 8-18**, which have been identified to reduce potentially significant adverse environmental impacts, prior to construction, during construction and/ or during operation of the Proposed Scheme.

21.1.2 This chapter summarises the mitigation measures both for ease of reference and for use by those overseeing the Contract Documents.

21.1.3 The Schedule of Environmental Commitments table includes the following information:

- Mitigation Reference Number – a unique ID assigned to each mitigation item so that it may be easily referenced in the Contract Documents
- Description of the mitigation measure
- Location and timing of mitigation
  - Four principal phases are identified for 'Timing of Measure'
    – Design, Pre-Construction, Construction, Post-Construction/ Operation
    – These identify when the measure shall be implemented, rather than when the mitigation is expected to realise benefits
- Monitoring requirements (if required)

21.2 Mitigation Schedules

21.2.1 **Table 21-1** to **Table 21-11** below present the required mitigation measures per topic for the Proposed Scheme, split into Standard A9 Mitigation Commitments, Embedded Mitigation and Project Specific Mitigation.

21.2.2 Standard A9 Mitigation Commitments have been assigned reference numbers derived from the environmental topic and mitigation item number, i.e. Standard Mitigation Commitment 1 for Community and Private Assets is referenced CP1.

21.2.3 The mitigation reference numbers for the Embedded and Project Specific Mitigation items are derived from the project number, environmental topic and mitigation item number, i.e. Project 7 Ecology measure 1 is referenced **P07-E1**.

Table 21-1: Schedule of Environmental Commitments – Standard Construction Commitments

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
Standard A9 Mitigation					
SMC-S1	Throughout Proposed Scheme	Pre-Construction & Construction	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 identified below in **Tables 21.2 to 21.11**. The relevant section(s) of the CEMP will be in place prior to the start of construction work. The CEMP will include, but not be limited to, subsidiary plans relating to: land (including a specific Soil Management Plan), geology and land contamination; surface water and groundwater (including a Flood Response and Pollution Incident Response Plan); ecology (Ecological Management Plan which will include specific Species Protection Plans and Habitat Management Plans); landscape, cultural heritage, air quality and noise and vibration.	To provide a framework for the implementation of construction activities in accordance with the environmental commitments and mitigation measures in the ES. It will be developed and evolve to avoid, reduce or mitigate construction impacts on the environment and the surrounding community.	Consultation with the relevant local authorities, other statutory bodies and regulatory authorities (Refer to Tables 21.2-21.11)
SMC-S2	Throughout Proposed Scheme	Pre-Construction and Construction	Prior to construction an Environmental Coordinator and 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 report to the Environmental Coordinator and 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.	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.	Approval by Transport Scotland
SMC-S3	Throughout Proposed Scheme	Pre-Construction and Construction	Throughout the construction period the Contractor will, as required, contribute towards the overall communications strategy for the A9 Dualling Programme. As part of this the Contractor will appoint a Community Liaison Officer supported by a liaison team as necessary who will: • liaise with the following: relevant local authorities; other statutory bodies and regulatory authorities; community councils and relevant community groups; and businesses and residents in local communities affected by the construction works; • 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; • support the production of project communications such as the project website and newsletters; 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.	To inform stakeholders and consultees throughout the construction period.	Consultation with the relevant local authorities, other statutory bodies and regulatory authorities, community councils and relevant community groups, and businesses and residents in local communities affected by the construction works
SMC-S4	Throughout Proposed Scheme	Construction	The Contractor will ensure that all site workers receive adequate environmental training relevant to their role prior to working on the construction site, including specific environmental project inductions and 'toolbox talks' on best practice construction methods as appropriate.	To ensure site workers are aware of best practice construction methods, mitigation measures and how they are implemented.	None required

Table 21-2: Schedule of Environmental Commitments – People and Communities - Community and Private Assets

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
Standard A9 Mitigation					
SMC-CP1	Throughout Proposed Scheme	Pre-Construction and Construction	Access to/ from residential, commercial and industrial and agricultural, forestry and sporting 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 2 weeks in advance, before they are put in place.	To maintain access to/ from residential, commercial and industrial and agricultural, forestry and sporting assets	None required
SMC-CP2	Throughout Proposed Scheme	Construction and Operation/ Post-Construction	Existing access arrangements to agricultural and forestry land outwith the land made available (LMA) boundary will not be prevented by the construction works during or post construction, unless alternative access is provided for.	To maintain access to/ from residential, commercial and agricultural/ forestry land.	None required
SMC-CP3	Throughout Proposed Scheme	Pre-Construction	Consultation with affected landowners and occupiers will be undertaken on the location and timing of planned construction works to reduce disturbance, as far as practicable, taking into account the overall construction programme.	To reduce disturbance on affected landowners.	Consultation with affected landowners and occupiers
SMC-CP4	All agricultural land	Pre-Construction	Notice of intention to commence construction work will be provided to owners and occupiers of agricultural land adjacent to the Proposed Scheme before works commence.	To ensure owners and occupiers of agricultural land adjacent to the Proposed Scheme are informed of the intention to commence construction work prior to works commencing.	None required
SMC-CP5	All agricultural land	Construction	Where practicable, temporary construction compounds that are required outwith the LMA boundary will not be sited on prime agricultural land or on areas of woodland and forestry.	To reduce potential impacts arising from temporary construction compounds on prime agricultural land or on areas of woodland and forestry.	None required
SMC-CP6	All agricultural land	Construction and Operation	Where appropriate, temporary fences will be provided during construction for the health and safety of the public and animals. Fencing of working areas will be to a standard adequate for excluding any livestock kept on adjoining land. Access by non-authorised personnel will not be permitted, unless prior permission is granted by the Contractor(s).	For the health and safety of the public and animals and to prevent unauthorised site access.	None required
SMC-CP7	All agricultural land	Construction	Where boundary features (e.g. fences, walls and hedges) require temporary or permanent alteration to allow construction, these will be reinstated with appropriate materials to provide a secure boundary.	To provide a secure boundary and reduce disruption to agriculture.	None required
SMC-CP8	Throughout Proposed Scheme	Construction	Soil resources will be managed in accordance with the 'Construction Code of Practice for the Sustainable Use of Soils on Construction Sites' (Defra, 2009). This will include the careful excavation, storage and replacement of topsoil and subsoil.	To ensure that soil mitigation measures are fully implemented and soil resources are protected.	None required

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
SMC-CP9	All agricultural land	Construction	Reasonable precautions will be taken during construction to avoid the spreading of soil-borne pests and diseases; animal and crop diseases; tree pests and diseases; and invasive species. A biosecurity protocol will be developed by the Contractor in consultation with the Animal and Plant Health Agency, the Scottish Government's Environment and Forestry Directorate and the Scottish Government's Agriculture, Food and Rural Communities Directorate, taking cognisance of relevant UK and Scottish Government biosecurity guidance.	To avoid the spreading of soil-borne pests and diseases; animal and crop diseases; tree pests and diseases; and invasive species.	Consultation with the Animal and Plant Health Agency, the Scottish Government's Environment and Forestry Directorate and the Scottish Government's Agriculture, Food and Rural Communities Directorate
SMC-CP10	Throughout Proposed Scheme	Pre-Construction	Pre-construction drainage surveys will be undertaken to reduce the likelihood of damage or disturbance to field and forestry drainage systems during construction. Where required, the integrity of the drainage system will be secured by the Contractor as part of pre-construction drainage works. Repairing and reinstatement of drains affected by construction will be agreed with the landowner/ occupier to ensure that land capability is maintained and the risk of flooding is not exacerbated.	To reduce the likelihood of damage or disturbance to field and forestry drainage systems during construction.	Consultation with affected landowners and occupiers
SMC-CP11	Throughout Proposed Scheme	Pre-Construction	Water supplies for livestock will be identified pre-construction and where supplies are lost or access is compromised by any construction works, temporary and/ or permanent alternative supplies will be provided as agreed with the landowner/ occupier.	To reduce disruption to landowners/ occupiers.	Consultation with affected landowners and occupiers
SMC-CP12	Throughout Proposed Scheme	Post-Construction / Operation	LMA that is declared surplus following completion of construction of the Proposed Scheme (including redundant road pavement and/ or access tracks) will be offered back to former owners or their successors in accordance with the Crichel Down Rules.	To return surplus land to former owners or their successors in accordance with the Crichel Down Rules.	Consultation with affected landowners and occupiers
SMC-CP13	Throughout Proposed Scheme	Construction	Where there are sporting or fishing rights adjacent to the working area, reasonable endeavours will be taken to minimise interference with enjoyment of them while recognising the primary objective to maintain a safe working environment for both contractors and users of the land and water.	To reduce interference or enjoyment of sport/ fishing while maintaining a safe working environment for both contractors and users of the land and water.	None required
SMC-CP14	Throughout Proposed Scheme	Pre-Construction	Where stands of trees are to be affected an arboricultural and/ or windthrow assessment will be undertaken pre-construction by the Contractor. Tree surgery and/ or felling will be carried out as necessary to ensure the safety of land and infrastructure.	To address safety risk to land within the Proposed Scheme and reduce impacts to forestry.	None required
SMC-CP15	Throughout Proposed Scheme	Post-Construction / Operation	On completion of works, any land required temporarily for construction works will be reinstated as far as practicable and in line with mitigation plans. A record of condition survey is to be undertaken of any land to be returned to agriculture, to ensure all land is restored as near to its original condition as is reasonably practicable.	To ensure appropriate restoration of land following completion of Proposed Scheme.	None required

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
Embedded Mitigation					
P07- CP1	Various	Design Construction	Provision of underledges/ underpasses for movement between the east and west of the A9; Allt Coire Dubhaig, Allt Coire Chuirn, Allt Coire Mhic-Sith	To minimise impacts on livestock movements	None required
P07-CP2	ch. 500	Design Construction	Provision of Dalnaspidal Junction underbridge	To minimise impacts on stock movement and estate operations	None required
P07-CP3	ch. 7,570	Design Construction	Provision of Drumochter Lodge access underbridge	To minimise impacts on stock movement and estate operations	None required
P07-CP4	Drumochter Lodge to end of Proposed Scheme	Design Construction	Making the former BDL track permanent	To retain the temporary access track for estate access	None required
Project Specific Mitigation					
P07-CP5	Throughout Proposed Scheme	Pre-Construction	Payment of financial compensation	To mitigate against loss of land and business viability impacts	Consultation with District Valuer and affected landowners and occupiers
P07-CP6	Throughout Proposed Scheme	Pre-Construction and Construction	An Agricultural and Estates Management Plan will be developed and a Clerk of Works appointed (covered under **Mitigation Item SMC-S1** in **Table 21-1** above), in order to employ appropriate mitigation on any impact upon livestock movement and grouse drives at the construction phase, particularly during nesting season and shoot days. This management plan will include details of the estate, its activities in proximity to the A9, specific seasons (such as deer stalking, grouse shooting, sheep dipping), an annotated map of principal activity areas, routes and access points, protocols for notifications required and relevant contact details. In terms of the temporary disturbance to grouse, careful management is required to minimise this disturbance which could incur no works during key times of the year for nesting.	To reduce impact on sporting estates	Consultation with affected landowners and occupiers
P07-CP7	Throughout Proposed Scheme	Pre-Construction	Avoidance and minimisation of earthworks encroachment into property boundaries	To minimise impact on all community and private assets	None required
P07-CP8	Throughout Proposed Scheme	Pre-Construction	Location of drainage and Sustainable Drainage Systems (SuDS) features as close to mainline and junction as possible	To minimise impact on all community and private assets	None required
P07-CP9	Throughout Proposed Scheme	Pre-construction	Minimisation of works boundary encroachments into, and provision of access to, local estate land and properties	To minimise impact on all community and private assets	None required

Table 21-3: Schedule of Environmental Commitments – People and Communities – Effects on all Travellers

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
Standard A9 Mitigation					
SMC-AT1	Throughout Proposed Scheme	Construction	As far as reasonably practicable, the construction programme will take into account the need to minimise the length of closures or restrictions of access for NMUs.	To minimise length of closures or restrictions of access for NMUs.	None required
SMC-AT2	Throughout Proposed Scheme	Construction	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.	To maintain safe access for NMUs throughout the construction works.	Any closures will be agreed with Transport Scotland (Rights of Way), CNPA and/ or PKC (local and core paths).
SMC-AT3	Throughout Proposed Scheme	Pre-Construction	In consultation with the relevant Roads Authority and public transport provider, bus stops affected by the works will be relocated safely with a safe access route provided for NMUs. **Does not apply to Project 7, more specific mitigation required for this Scheme.**	To maintain access to Public Transport facilities.	Consultation with the relevant Roads Authority and public transport provider
SMC-AT4	Throughout Proposed Scheme	Construction	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, the location of haul roads 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.	To avoid or reduce disruption to the road traffic.	None required
SMC-AT5	Throughout Proposed Scheme	Construction	Reasonable precautions will be taken by the Contractor to avoid or reduce road closures. One lane in each direction will be provided for A9 traffic during peak hours (Mon to Fri) except in exceptional circumstances and for closures which are pre-approved by Transport Scotland e.g. those required during blasting.	To avoid or reduce road closures and resulting disruptions to traffic.	Approval required from Transport Scotland in the event of required A9 lane closures.
SMC-AT6	Throughout Proposed Scheme	Construction	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 (such as drivers re-routing away from the A9), and will review and update traffic management provisions as appropriate in discussion with Transport Scotland.	To reduce disruption to the road users.	None required
SMC-AT7	Throughout Proposed Scheme	Construction	Appropriate lighting will be provided during any necessary night-time working, taking into account the requirements of **Mitigation Items SMC-E10** (**Table 21-6**) **and SMC-LV4** (**Table 21-7**)**.**	To mitigate potential impacts on driver stress such as fear of potential accidents due to inadequate lighting provision.	None required

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
SMC-AT8	NMU facilities	Construction	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. any bridges, ramps or footpaths will not present potential barriers to disabled people such as the gradient or surfacing. • NMU access shall be provided in accordance with the objectives set out in the A9 Dualling NMU Access Strategy (Transport Scotland, 2016a). • 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. • Safety of paths will be considered in accordance with the outcome of the Road Restraints Risk Assessment Process and may require provision of barriers. New cycleways/ footpaths will use non-frost susceptible materials to reduce risk of degradation.	To maintain access for NMUs and provide appropriate facilities based on use and improve access for NMUs.	None required
n/a (note)	*n/a*	*n/a*	*Further to the above, the mitigation items detailed in **Table 21.7** (Landscape and Visual), **Table 21.9** (Air Quality) and **Table 21.10** (Noise and Vibration) will reduce the adverse amenity impacts on NMU and vehicle travellers during construction.*	*To reduce the adverse amenity impacts on NMU and vehicle travellers during construction.*	*n/a*
Embedded Mitigation					
P07-AT1	Throughout Proposed Scheme Northbound	Design and Construction	Local realignment of NMU1 (NCN7) shall be undertaken where required through the scheme extent.	To maintain access to NMU1 upon operation of the Proposed Scheme.	None required
P07-AT2	ch.500	Design and Construction	NMU and vehicle underpass to be provided at Dalnaspidal Junction.	To maintain access between NMU5 and Dalnaspidal upon operation of the Proposed Scheme.	None required
P07-AT3	ch.3,020	Design and Construction	Allt A'Chaorainn watercourse crossing with hardstanding ledge for pedestrians, primarily for estate use.	To provide NMU access upon operation of the Proposed Scheme.	None required
P07-AT4	ch.7,570	Design and Construction	NMU and vehicle underpass to be provided at Balsporran/ Drumochter Junction.	To provide NMU provision and access upon operation of the Proposed Scheme.	None required
P07-AT5	ch. 800 (northbound), ch.3,600 (northbound) and ch.4,000 (southbound)	Design and Construction	Three Type A lay-bys with enlarged segregation strip and potential links to NMU routes to be provided at Dalnaspidal (northbound) and Drumochter pass (northbound and southbound), refer to **Table 21-7**, **P07-LV3**.	To provide NMU access and safe stopping places, specifically linking NMU1.	None required
P07-AT6	ch. 600-900 Northbound	Design and Construction	NMU link from Dalnaspidal northbound lay-by to the NCN7 to be provided.	To provide access from lay-by to NMU1 and Dalnaspidal.	None required

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-AT7	ch. 3,100-3,800 Southbound	Design and Construction	NMU link to be provided from the southbound Drumochter Type A lay-by to the Allt A'Chaorainn underpass.	To provide access from lay-by to NMU1 and 6	None required
P07-AT8	ch. 7,300 Southbound	Design and Construction	Access link from Drumochter Lodge to former Beauly Denny Line track to be provided.	To provide estate access.	None required
P07-AT9	Throughout Proposed Scheme	Design and Construction	Sensitive slope design with input from a Landscape Architect to soften earthworks; refer to mitigation commitment **P07-LV1** in **Table 21-7**.	To lessen the visual impact of the scheme and blend earthworks into the surrounding landscape.	None required
P07-AT10	Throughout Proposed Scheme	Design and Construction	SuDS design to integrate with roadside slopes at all locations where SuDS are adjacent to these slopes. SuDS basins to look as natural as possible to blend into surrounding very open landscape. Refer to mitigation commitment **P07-LV2** in **Table 21-7**.	To lessen the visual impact and changes in views from the road/ amenity value of NMU routes.	None required
Project Specific Mitigation					
P07-AT11	Throughout Proposed Scheme	Construction	Pick up/ drop off 'NMU shuttle' service to operate during working hours for the duration of any closure of NMU1 (NCN7) as well as 'out of hours' access in the form of a temporary diversion suitable for walkers and cyclists.	To maintain safe access to NMU1 throughout the construction works.	Any closures will be agreed with Transport Scotland (Rights of Way), CNPA and/ or P&KC (local and core paths).
P07-AT12	ch. 500 Southbound	Construction	Alternative access and A9 pedestrian crossing to be provided for maintenance, estate and NMU access to NMU5 when current access is closed/ removed.	To maintain safe access for NMU5 throughout the construction works.	None required
P07-AT13	Throughout Proposed Scheme Northbound	Design and construction	Appropriate native species woodland planting under planted by heath along the northbound carriageway embankment and within the River Truim and Allt Dubhaig floodplains, as shown on the **Environmental Mitigation Drawings 6.1 to 6.7 (Volume 3).** Refer to **Table 21-7**, **P07-LV21**.	To mitigate views from the road and the visual amenity of NMU routes.	None required
P07-AT14	Throughout Proposed Scheme Northbound	Design and construction	Seeding, heath and scrub planting to the west of the A9 between the verge and HML railway, as shown on the **Environmental Mitigation Drawings 6.1 to 6.7 (Volume 3)**. Refer to **Table 21-7**, **P07-LV22**.	To mitigate views from the road and the visual amenity of NMU routes.	None required
P07-AT15	Throughout Proposed Scheme Mainly southbound	Design and construction	Where necessary, reinstatement of coniferous woodland belt to the east of the A9 with varied mix of native species including coniferous and broadleaf trees and shrubs. As shown on the **Environmental Mitigation Drawings 6.1 to 6.7 (Volume 3).** Refer to **Table 21-7**, **P07-LV23**.	To mitigate views from the road and the visual amenity of NMU routes.	None required

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-AT16	Between ch. 6,750 – 7,000 Northbound	Design and construction	Planting at Balsporran car park to include a wide range of native grass seeding, heath, scrub and small tree species of local provenance to improve biodiversity and visual amenity shall be planted around Balsporran access and car park to soften the SuDS and integrate landscape mitigation. Planting as shown on the **Environmental Mitigation Drawings 6.1 to 6.7 (Volume 3).** Refer to **Table 21-7**, **P07-LV17**.	To mitigate views from the road and the visual amenity of NMU1 and 8.	None required
P07-AT17	Approximate ch. 7400 - 7600 Northbound	Design and construction	Replace woodland planting lost opposite Drumochter Lodge, between the A9 carriageway and slip roads and the River Truim with appropriately diverse species of planting as specified on **Environmental Mitigation Drawings 6.1 to 6.7 (Volume 3).** Any woodland/ vegetation lost during construction and the maintenance period shall be replaced with native mixed proposed woodland species to increase biodiversity and enhance landscape character. Refer to **Table 21-7**, **P07-LV20**.	To mitigate views from the road and the visual amenity of NMU1.	None required
P07-AT18	Throughout Proposed Scheme	Design and construction	Seeding and scrub planting shall be used to soften SuDS basin excavations/ earthworks/ slopes and drainage features to integrate these features, planting as shown on the **Environmental Mitigation Drawings 6.1 to 6.7 (Volume 3).** Refer to **Table 21-7**, **P07-LV27**.	To mitigate views from the road and the visual amenity of NMU routes.	None required
P07-AT19	ch. 5,000 -5,800 Northbound	Design and construction	Appropriate, low level shrub planting and seeding shall be planted adjacent to the retaining wall where space allows. Planting as shown on the **Environmental Mitigation Drawings 6.1-6.7 (Volume 3).** Refer to **Table 21-7**, **P07-LV9**.	To mitigate the visual amenity of NMU1 (NCN7).	None required
P07-AT20	ch. 800 (northbound), ch.3,600 (northbound) and ch.4,000 (southbound)	Design and construction	Further work to type A lay-bys to include features such as retaining walls, viewing platforms, steps, ramps, furniture and interpretation boards – this will be subject to design detail and Transport Scotland approval. Refer to project specific mitigation **P07-LV4 to LV6** in **Table 21-7**.	To offer increased enjoyment of the surrounding landscape for NMUs with more pleasant rest stops	Transport Scotland
P07-AT21	Throughout Proposed Scheme	Construction	Contractor to operate phased programme of works to limit concurrent or long periods of closures to existing parking areas at Dalnaspidal, Drumochter Pass lay-bys and Balsporran Cottages.	To provide NMU access and safe stopping places.	None required

Table 21-4: Schedule of Environmental Commitments – Geology, Soils and Groundwater

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
Standard A9 Mitigation					
SMC-G1	Throughout Proposed Scheme	Pre-Construction	Prior to construction, consultation will be undertaken with the relevant local authorities and SEPA 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). Any remedial action undertaken in relation to land affected by contamination will be carried out under the appropriate remediation licencing.	To reduce impacts from contaminated land sources.	Consultation with Local Authority (and SEPA as required).
SMC-G2	Throughout Proposed Scheme	Pre-Construction	Prior to construction and where potential contamination has been identified, further site investigations sufficient to determine the extent and type of contaminants present will be undertaken as necessary to inform identification of appropriate construction methods and any additional mitigation.	To determine the extent and type of contaminants present and to inform identification of appropriate construction methods and any additional mitigation.	None required
SMC-G3	Throughout Proposed Scheme	Pre-Construction & Construction	Prior to construction, appropriate health and safety and waste management procedures for working with potentially contaminated soils will be established. 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), HSE Guidance Note MS31 (HSE, 2012) and the Health and Safety Commission Approved Code of Practice and Guidance Note. These procedures will be implemented as appropriate during construction.	To ensure appropriate health and safety and waste management procedures for working with potentially contaminated soils are followed.	None required
SMC-G4	Throughout Proposed Scheme	Construction & Post-Construction / Operation	Risks to construction and maintenance staff working with/ near contaminated land will be mitigated by the implementation of **Mitigation Item SMC-G3** in **Table 21-4** 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. Construction staff will be trained to identify asbestos containing material.	To reduce impacts from contaminated land sources and confirm the safety of construction and maintenance staff.	None required
SMC-G5	Throughout Proposed Scheme	Construction	Appropriate training will be provided for personnel involved in earthworks activities to enable implementation of a watching brief to identify presence of previously unidentified contamination.	To identify potential presence of previously unidentified contamination.	None required
SMC-G6	Throughout Proposed Scheme	Pre-Construction & Construction	Where required, landowner consultation and site visits will be undertaken to confirm the location of septic tanks and associated infrastructure. Where septic tanks are located within the LMA they will be relocated subject to discussion and agreement with the affected landowner(s).	To mitigate the loss of any septic tanks.	Approval from landowners
SMC-G7	Throughout Proposed Scheme	Construction	To prevent cross contamination and pollution from piling works undertaken in areas of land affected by contamination, the Contractor will undertake 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'.	To prevent cross contamination and pollution from piling works undertaken in areas of land affected by contamination.	None required

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
SMC-G8	Throughout Proposed Scheme	Construction	Excavated soils deemed unsuitable for reuse 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, May 2015) to determine whether they are hazardous or non-hazardous. This will establish the most appropriate and cost effective waste stream for the waste materials.	To determine whether disposed soils are hazardous or non-hazardous.	None required
SMC-G9	Throughout Proposed Scheme	Pre-Construction	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 Proposed Scheme.	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 SMC-M3** in **Table 21-11**).	None required
SMC-G10	Throughout Proposed Scheme	Construction	Where peat is encountered during construction, it will be excavated, stored and re-used if possible, taking cognisance of 'Development on Peatland: Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and the Minimisation of Waste' (Scottish Renewables and SEPA, 2012) and The Waste Management Licensing (Scotland) Regulations 2011. This will be captured in a Peat Management Plan that will be developed by the Contractor. **Does not apply to Project 7, more specific mitigation required for this Scheme.**	To comply with relevant waste management practices under The Waste Management Licensing (Scotland) Regulations 2011 and reduce impacts on peatlands.	Consultation with SEPA
SMC-G11	Throughout Proposed Scheme	Pre-Construction & Construction	Where concrete materials are proposed to be used, appropriate guidance such as 'Building Research Establishment (BRE) SD1:2005' and 'British Standard (BS) BS8500' should be followed to ensure that ground conditions are appropriate for the use of concrete at each given location.	To ensure that ground conditions are appropriate for the use of concrete at each given location.	None required
SMC-G12	Contamination sources: GGD-09, GGD-75 and GGD-21 to GGD-74	Pre-Construction, Construction & Post-Construction / Operation	Where potential pollutant pathways for ground gas have been identified, a ground gas monitoring programme will be developed prior to construction in adherence to 'BS 8485:2015 - Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings''. This will include an assessment of gassing issues following receipt of additional ground gas monitoring results at selected boreholes. Appropriate working methods will be developed and adopted during below ground site construction works (including piling works and excavations). This should include as a minimum, gas monitoring undertaken prior to any entry into excavations, confined spaces or below ground structures and use of PPE as a last resort. If ground gas issues are identified during construction, further post construction monitoring will be undertaken and/ or appropriate gas protection measures will be incorporated into the final design.	To mitigate against potential impacts on human health during construction and Off Site Receptors (Local residents, transient traffic (foot, road and rail traffic) in the surrounding area) due to ground gas.	None required

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
SMC-G13	Throughout Proposed Scheme	Construction	Unless it can be demonstrated by the Contractor via a Quantitative Risk Assessment that no water quality impacts will occur due to leaching from SuDS retention ponds and detention basins, operational SuDS features will be lined.	To mitigate against potential impacts on water quality due to leaching from SuDS features.	SEPA
SMC-G14	Throughout Proposed Scheme	Construction	Storage of excavated soils and made ground will be minimised on site (spatially and in duration) and storage areas will be appropriately lined, with adequate drainage management in place.	To ensure that no polluted water percolates into the ground or contaminated run-off is generated.	None required
SMC-G15	Throughout Proposed Scheme	Pre-Construction	Risk assessments will be undertaken before explosives can be used on site.	To minimise or control the impact of blasting on bedrock geology.	None required
n/a (note)	*n/a*	*n/a*	*Further to the above, the implementation of Mitigation Items detailed in **Chapter 11** (Road Drainage and the Water Environment) and the measures detailed in **Chapter 16** (Air Quality).*	*To mitigate the water pollution risk to groundwater and avoid the creation of a statutory nuisance associated with dust and air pollution when working with contaminated land.*	*n/a*
Project Specific Mitigation					
P07-G1	Throughout Proposed Scheme	Pre-Construction & Construction	Prior to construction, a suitably qualified (or team of suitably qualified) and experienced Environmental Clerk of Works (EnvCoW) shall be appointed by the Contractor to oversee implementation of mitigation and monitoring relating to soils, potential contamination, groundwater, PWS and the management of waste materials. A suitably qualified and experienced Ecological Clerk of Works (ECoW) shall also be appointed prior to construction, to oversee and provide specific inputs to the implementation of proposed mitigation and monitoring relating to peat and GWDTE.	To oversee implementation of mitigation and monitoring relating to soils, potential contamination, groundwater, PWS, the management of waste materials, peat and GWDTE.	None required
P07-G2	ch. 400 to ch. 625 ch. 625 to ch. 975 ch. 1,500 to ch. 1,850 ch. 5,200 to ch. 5,750	Design, Pre-Construction & Construction	Naturalistic rock cutting may be possible in areas of widening and cutting identified as being likely to intercept bedrock, the extent of which shall be determined during the detailed design by the Contractor, following risk assessment (**Mitigation Item SMC-G15** in **Table 21-4**). During construction, rock mapping and inspections shall be undertaken by a suitably qualified and experienced engineering geologist appointed by the Contractor in those areas determined, with the cuts being profiled to be as natural as possible with no visible engineered elements.	To review stability and minimise the requirement for meshing or other stabilisation measures within final rock cut profiles.	None required
P07-G3	ch. -900 to ch. 650 ch. 1,900 ch. 3,300 to ch. 4,800 ch. 5,400 to ch. 5,900 ch. 6,100 to ch. 6,600	Construction	Soil logging with photographs shall be undertaken and documented by a suitably qualified and experienced engineering geologist appointed by the Contractor during earthworks which disturb marginal moraine ridges and/ or mounds associated with the wider Drumochter Hummocky Moraines landform assemblage.	To compensate for partial or total feature losses, by recording the stratigraphy within examples of these landforms and gaining an insight into former glacier dynamics	Consultation with SNH

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-G4	ch. 7,200 to ch. 9,741	Construction & Operation	During construction or delivery of upgrades to the existing BDL track, the Contractor shall minimise disturbance of the natural soil profile and landform across the area of Allt Coire Chuirn as far as is practicable. Damage to partial alluvial fan exposure areas at bar locations on Allt Coire Chuirn shall be avoided through set-backs as required and appropriate working procedures shall be adopted as per **Mitigation Items SMC-W1** to **SMC-W5** and **SMC-W13** to **SMC-W17** in **Table 21-5** in relation to in-channel works and hydromorphology.	To minimise additional potential disturbance to soils and landform across the area, partial exposures and active channel morphology	Consultation with SNH
P07-G5	**Mainline** ch. 3,400 to ch. 4,600 ch. 3,950 to ch. 4,300 ch. 7,100 to ch. 7,200 **NCN7** ch. 3,850 to ch. 4,100	Design, Pre-Construction & Construction	Where peat conditions and depths permit, the Contractor shall design and include measures (such as floated access tracks and piled or bridged solutions for embankments or structures) to avoid or minimise peat excavation and disturbance. This shall take account of the unique peat characteristics, and follow guidance on the design, duration and timing of construction, the sequencing of construction and hydrology considerations in 'Floating Roads on Peat: A Report into Good Practice in Design, Construction and Use of Floating Roads on Peat with particular reference to Wind Farm Developments in Scotland' (SNH/ FCS, 2010) and others, as necessary.	To reduce peaty soil and peat disturbance and resultant excavation volumes	None required
P07-G6	**Mainline** ch. 3,400 to ch. 4,600 ch. 3,950 to ch. 4,300 ch. 7,100 to ch. 7,200 **NCN7** ch. 3,850 to ch. 4,100	Design, Pre-Construction & Construction	Additional site surveys comprising peat probing, core sampling, soil logging with photographs, and pollen count laboratory analysis shall be completed and documented by the Contractor prior to and during construction works within the Pollen Record Site in the Pass of Drumochter.	To compensate for partial disturbance and loss of sediment and vegetational records	Consultation with SNH
P07-G7	Throughout Proposed Scheme	Pre-Construction & Construction	The Contractor shall develop a Soil Management Plan prior to construction, for implementation during construction, with cognisance of the requirements identified in relation to peaty soils and peat (**Mitigation Item P07-G8** in **Table 21-4**) and adopting principles from 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) and the 'Construction Code of Practice for the Sustainable Use of Soils on Construction Sites' (DEFRA, 2009).	To document and ensure that soil resources and soils of conservation value are excavated, managed, re-used and replaced sustainably and appropriately	Consultation with SEPA

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-G8	Throughout Proposed Scheme	Pre-Construction, Construction & Post-Construction	Prior to construction, the Contractor shall refine the OPMP (**Appendix 10.6** (**Volume 2**)) of the ES) for implementation prior to, during and following construction as the Construction stage Peat Management Plan (PMP). The Construction stage PMP shall adopt the principles and best practice measures detailed in the OPMP, with refinements made by the Contractor to include the establishment of detailed site-specific method statements related to construction techniques and locations, estimated excavation volumes, excavation procedures, temporary works activities, temporary storage, transportation, handling, proposed peat re-use areas and activities within those. Monitoring requirements and timescales for prior to, during and following construction, particularly with regards re-use and restoration works, shall be established and implemented by the Contractor as necessary, with all refinements made taking cognisance of best practice in 'Development on Peatland: Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and the Minimisation of Waste' (Scottish Renewables and SEPA, 2012) and others, as necessary.	To comply with relevant waste management practices under The Waste Management Licensing (Scotland) Regulations 2011 and manage, reduce and monitor impacts on peat and peaty soils	Consultation with SNH, SEPA and CNPA required to agree on the Construction stage Peat Management Plan (PMP) and any proposed peat re-use
P07-G9	Throughout Proposed Scheme	Pre-Construction, Construction & Post-Construction	Through adoption and refinement of the OPMP, the Contractor shall identify and propose environmentally beneficial re-uses of peat that is excavated during construction. Provisional candidate areas for this have been identified as detailed in the OPMP (**Appendix 10.6** (**Volume 2**) of the ES) and illustrated in **Drawings 10.38** to **10.44** (**Volume 3**), though the Contractor may identify additional areas to this within the LMA or elsewhere, by agreement prior to or during construction. Following re-use, dedicated monitoring of water table and vegetation in the re-use areas adopted shall be undertaken by the Contractor (**Mitigation Item P07-G8** in **Table 21-4**) and the requirements for additional treatment work such as but not limited to, seeding, compaction, tapering, removal of invasive species and fencing, established on an ongoing basis in consultation with SEPA, SNH and CNPA.	To provide mitigation for peat excavation and disturbance	See **Mitigation Item P07-G8**
P07-G10	Throughout Proposed Scheme	Design, Pre-Construction & Construction	Temporary storage of excavated peat shall be avoided wherever possible by transporting it to identified re-use locations as soon as is practicable, and the time spent in storage shall be kept to a minimum where possible. Where this is not possible during construction, the Contractor shall take account of the Preliminary Peat Landslide Risk Assessment findings (**Appendix 10.5** (**Volume 2**) of the ES), undertake additional quantitative assessment where necessary and identify appropriate storage areas for excavated peat, including, varying or additional to those provisionally highlighted in **Drawings 10.38** to **10.44** (**Volume 3**).	To minimise peat volumes in storage and the likelihood of drying.	See **Mitigation Item P07-G8**
P07-G11	Throughout Proposed Scheme	Pre-Construction & Construction	Where excavated peat does require temporary storage, the areas for this shall avoid being near watercourses through appropriate set backs. Areas of GWDTE habitat assessed as likely moderate and/ or highly dependent on groundwater in **Appendix 10.2** (**Volume 2**) of the ES shall also be avoided where possible – particularly areas of or containing discrete M6, M10, M11 and M15a flushes and M32 or M37 springs identified on **Drawings 10.24** to **10.30** (**Volume 3**). Where possible, peat will be extracted and relocated as 300mm to 500mm deep turves. If peat turves need to be stored for any length of time, they will be stored vegetation side up, stacked no more than 1.00m high, and monitored during all weather conditions and kept wet as necessary to prevent them from drying out.	To minimise peat volumes in storage, the likelihood of drying and potential effects on GWDTE	See **Mitigation Item P07-G8**

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-G12	Throughout Proposed Scheme	Construction & Post-Construction	For temporary construction-stage SuDS and related drainage, the Contractor shall avoid areas of peat and avoid areas of GWDTE habitat assessed as being likely moderate and/ or highly dependent on groundwater in **Appendix 10.2** (**Volume 2**) of the ES. This shall be achieved through micrositing during detailed design and the use of above-ground solutions requiring no or limited excavation, such as siltbusters, where possible, during construction. Areas of peat or GWDTE habitat which are unavoidable and in which excavation is required for temporary construction-stage SuDS and drainage shall be re-instated by the Contractor as soon as possible following the completion of construction works. Such re-instatement shall return the areas to their former habitat type as far as is practicable using species appropriate to the environment and of local provenance.	To reduce peaty soil and peat disturbance, resultant excavation volumes and re-instate those areas which are temporarily disturbed	See **Mitigation Item P07-G8**
P07-G13	Throughout Proposed Scheme	Design, Construction & Post-Construction	For temporary haul roads or access tracks required during construction, the Contractor shall avoid areas of peat and areas of GWDTE habitat assessed as being likely moderate and/ or highly dependent on groundwater in **Appendix 10.2** (**Volume 2**) of the ES. Where unavoidable, floated track construction shall be considered where conditions and depths permit, with guidance from 'Floating Roads on Peat: A Report into Good Practice in Design, Construction and Use of Floating Roads on Peat with particular reference to Wind Farm Developments in Scotland' (SNH/ FCS, 2010) and others, as necessary. All temporary haul roads and access tracks created during construction shall be fully re-instated by the Contractor following construction.	To reduce peaty soil and peat disturbance, resultant excavation volumes and re-instate those areas which are temporarily disturbed	See **Mitigation Item P07-G8**
P07-G14	Throughout Proposed Scheme	Design, Pre-Construction & Construction	Where potential peat landslide or bog burst risks have been identified in the Preliminary Peat Landslide Risk Assessment and Preliminary Risk Register in **Appendix 10.5** (**Volume 2**) of the ES, the Contractor shall undertake additional quantitative assessment of these prior to construction and follow guidance within 'Peat Landslide Hazard and Risk Assessments: Best Practice for Proposed Electricity Generation Developments' (Scottish Executive, 2006) for the implementation of additional micrositing of Proposed Scheme elements during detailed design, and to determine and implement any required mitigation such as catch ditches, fences, walkovers and inspections during and following construction.	To identify and mitigate against potential peat landslide or bog burst risks	Consultation with SNH, SEPA and CNPA
P07-G15	Throughout Proposed Scheme	Pre-Construction	A number of widening or other cuttings have been identified as having the potential to intercept groundwater. Volumes of groundwater drainage will need to be considered in the context of potential groundwater abstraction CAR licenses prior to construction works commencing.	To comply with CAR license requirements and protect the water environment	Consultation with and approval from SEPA
P07-G16	Throughout Proposed Scheme	Design, Pre-Construction & Construction	A detailed assessment will be undertaken for areas of widening or cutting anticipated to result in groundwater-related impacts on GWDTE and surface water receptors. This shall be completed prior to construction using all available GI data, including additional monitoring and testing data from the Preliminary GI and Detailed GI. If impacts are confirmed as significant, a specific GWDTE monitoring and mitigation plan will be developed, with drainage designs, groundwater exclusion, containment or other control measures determined by the Contractor during detailed design and implemented during construction to reduce drawdown at sensitive receptors where appropriate and practicable. Drainage and pumping from excavations will be carefully monitored during construction, with additional mitigation such as redirecting abstracted water to affected receptors implemented as necessary.	To determine GWDTE risks, assess changes in groundwater level and quality and ensure that GWDTE are protected	Consultation with SEPA

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-G17	Throughout Proposed Scheme	Design, Pre-Construction & Construction	A differential settlement assessment shall be undertaken by the Contractor prior to construction in excavation areas that have the potential to intercept groundwater and which are located in proximity to existing infrastructure. This shall be completed using all available GI data, including additional monitoring data from the Preliminary GI and Detailed GI. Should potential settlement risks be identified, mitigation measures shall be implemented by the Contractor during construction where necessary and may include monitoring of groundwater level variations, implementation of condition surveys and monitoring of infrastructure.	To determine if adjacent or surrounding structures or infrastructure are at risk of settlement and implement mitigation where required	None required
P07-G18	Throughout Proposed Scheme	Pre-Construction & Construction	The Contractor shall review areas of groundwater likely to be intercepted by excavations and implement treatment as required prior to discharge. This shall be completed using all available GI data, including additional monitoring and testing data from the Preliminary GI and Detailed GI; in the preparation of discharge licensing considerations. Containment facilities and discharge locations for abstracted groundwater during construction shall be defined by the Contractor taking water quality characteristics into account.	To determine treatment and discharge requirements for intercepted groundwater	Consultation with SEPA
P07-G19	Throughout Proposed Scheme	Construction	Any excavations within or alongside areas of deep peat or blanket bog habitat should be bunded with sheets of plastic or metal sheet pilings to assist retaining water and preventing local drainage of the adjacent or surrounding peat mass margins where practicable.	To minimise dewatering of areas of peat	See **Mitigation Item P07-G8**
P07-G20	Throughout Proposed Scheme	Pre-Construction , Construction & Post-Construction	A groundwater monitoring network shall be established within and adjacent to areas of GWDTE identified to be at potential risk of impact, with monitoring completed in accordance with 'LUPS-GU31 Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems, Version 2' (SEPA, 2014). Such monitoring shall involve groundwater level and quality readings, as well as repeated NVC surveys based on the GWDTE monitoring and mitigation plan developed in **Mitigation Item P07-G16** in **Table 21-4.**	To determine GWDTE risks, assess changes in groundwater level and quality and ensure that GWDTE are protected	Consultation with SEPA
P07-G21	Throughout Proposed Scheme	Pre-Construction , Construction & Post-Construction	The Contractor shall establish a Groundwater and Surface Water Management Plan with associated monitoring programme prior to construction, to be adhered to during construction, and post construction, as required by the relevant regulatory bodies. This shall be prepared with cognisance of **Mitigation Items SMC-W1** to **SMC-W17** detailed in **Table 21-5** and monitoring requirements related to GWDTE where necessary (**Mitigation Item P07-G20** in **Table 21-4**).	To document and ensure mitigation and monitoring measures are in place to protect the water environment	Consultation with SEPA
P07-G22	Throughout Proposed Scheme	Design, Pre-Construction & Construction	To maintain hydrological connectivity between and within wetland habitats, particularly springs, flushes and GWDTE assessed as likely moderate and/ or highly dependent on groundwater in **Appendix 10.2** (**Volume 2**) of the ES; works around areas containing discrete M6, M10, M11 and M15a flushes and M32 or M37 springs identified on **Drawings 10.24** to **10.30** (**Volume 3**), shall be carried out carefully by the Contractor, with a buffer zone of at least 10m from the features marked out on the ground and as far as possible, additional works micrositing during detailed design and construction to avoid them. Any works within the buffer zone shall be supervised by a suitably qualified and experienced ECoW appointed by the Contractor and shall be planned to maintain unpolluted water flows.	To mitigate and control potential effects on GWDTE during construction	Consultation with SEPA

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-G23	Drumochter Estate Access Track (former BDL track)	Design, Construction & Post-Construction	For construction and delivery of upgrades to the former BDL track at Drumochter, trackside drainage will include a lateral channel cut along the uphill side of the track to intercept natural run-off and shallow flush and groundwater flow. This shall be conducted under the track at regular intervals through cross-drains. Within the LMA, the trackside drain shall be broad and shallow with moderate gradients to prevent scouring, and flows from this drainage will be treated and controlled by filtration through check dams and dispersal trenches. During operation, drains associated with the track shall be inspected periodically and cleaned out as necessary.	To maintain hydrological connectivity between up-gradient and down-gradient GWDTE and prevent/ alleviate overland water flow disruptions	None required
P07-G24	Private Water Supplies: ABS 7.4 (Dalnaspidal Lodge) and ABS 7.5 (Old Schoolhouse/ Station Cottages)	Pre-Construction & Construction	Additional surveys shall be undertaken by the Contractor prior to construction, to confirm the exact location and extent of the Allt Coire Mhic-Sith surface water supply source and network within the LMA for Dalnaspidal Lodge (ABS 7.4) and the Old Schoolhouse/ Station Cottage (ABS 7.5) properties. If impacts to the supply source and/ or network are confirmed, the Contractor shall incorporate protective measures during construction to protect the supply source and network. If protection is not possible in the context of the works, a replacement/ diverted network shall be put in place or temporary or long-term alternative source of water provided as necessary. Specific monitoring and mitigation requirements for the supply will be determined by the Contractor in consultation with landowners, residents, P&KC and SEPA.	To protect PWS and provide an alternative, replacement or diverted supply network as necessary	Liaison with landowner and residents, and consultation with P&KC and SEPA
P07-G25	Private Water Supplies: ABS 7.6 (Dalnaspidal Lodge)	Construction	The borehole water supply source for properties at Dalnaspidal (ABS 7.6) shall be monitored for yield and quality. If significant adverse impacts on these are identified, corrective actions will be undertaken and could include the provision of a temporary or long-term alternative source of water. Specific monitoring and mitigation requirements for the supply will be determined by the Contractor in consultation with landowners, residents, P&KC and SEPA.	To monitor yield/ quality of PWS and provide an alternative, replacement or diverted supply network as necessary	Liaison with landowner and residents, and consultation with P&KC and SEPA
P07-G26	Private Water Supplies: ABS 7.7 (Possible Well)	Pre-Construction & Construction	Additional surveys shall be undertaken by the Contractor prior to construction, to confirm the location, status, depth and use of the possible well feature at Dalnaspidal (ABS 7.7) and any associated pipe network. If this remains to be utilised as a water source and significant adverse impacts are confirmed, an alternative source of water and replacement/ diverted network shall be put in place, If the well is confirmed as redundant or inoperable, decommissioning shall be undertaken by the Contractor during construction in accordance with 'Good Practice for Decommissioning Redundant Boreholes and Wells' (SEPA, 2010) and others, as necessary.	To protect PWS and provide an alternative, replacement or diverted supply network or decommission as necessary	Liaison with landowner and residents, and consultation with P&KC and SEPA
n/a (note)	*n/a*	*n/a*	*Further to the above, Mitigation Items P07-E7, P07-E8, P07-E11, P07-E14, P07-E15 and P07-E25 detailed in **Table 21-6** will be implemented in relation to temporary works and sensitive peatland and GWDTE habitats, and habitat re-instatement and restoration works within the Outline Habitat Management Plan (OHMP) in **Appendix 12.11** (**Volume 2**) of the ES.* *The implementation of Mitigation Items detailed in **Table 21-5** will also mitigate water pollution-related risks to groundwater, GWDTE and PWS.*	*To reduce temporary impacts on peatland or GWDTE habitats and deliver specific mitigation measures to re-instate and restore notable habitats that are impacted*	*n/a*

Table 21-5: Schedule of Environmental Commitments – Road Drainage and the Water Environment

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
Standard A9 Mitigation					
SMC-W1	Throughout Proposed Scheme	Design, Pre-Construction & Construction	In relation to authorisations under CAR, the Contractor will be required to provide a detailed Construction Method Statement which will include proposed mitigation measures for specific activities including any requirements identified through the pre-CAR application consultation process.	To mitigate construction impacts on the water environment.	CAR applications require approval from SEPA
SMC-W2	Throughout Proposed Scheme	Pre-Construction & Construction	In relation to flood risk, the Contractor will implement the following mitigation measures during construction: • The Flood Response Plan (as part of the CEMP, refer to **Mitigation Item SMC-S1** in **Table 21-1**) will set out the following mitigation measures to be implemented when working within the functional floodplain (defined here as the 0.5% AEP (200-year) flood extent): ➢ Routinely check the Met Office Weather Warnings and the SEPA Floodline alert service for potential storm events (or snow melt), flood alerts and warnings relevant to the area of the construction works. ➢ During periods of heavy rainfall or extended periods of wet weather (in the immediate locality or wider river catchment) river levels will be monitored using for example SEPA Water Level Data when available/visual inspection of water features. The Contractor will assess any change from base flow condition and be familiar with the normal dry weather flow conditions for the water feature, and be familiar with the likely hydrological response of the water feature to heavy rainfall (in terms of time to peak, likely flood extents) and windows of opportunity to respond should river levels rise. ➢ Should flooding be predicted, works close or within the water features should be immediately withdrawn (if practicable) from high risk areas (defined as: within the channel or within the bankfull channel zone - usually the 50% (2-year) AEP flood extent). Works should retreat to above the 10% AEP (10-year) flood extent) with monitoring and alerts for further mobilisation outside the functional floodplain should river levels continue to rise. • Plant and materials will be 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 Environmental Clerk of Works (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 banks. • Temporary drainage systems will be implemented to alleviate localised surface water flood risk and prevent obstruction of existing surface runoff pathways. Where practicable, temporary haul routes will be located outside of the functional floodplain.	To reduce the risk of flooding impacts on construction works.	None required

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
SMC-W3	Throughout Proposed Scheme	Pre-Construction Construction & Post-Construction / Operation	In relation to construction site runoff and sedimentation, the Contractor will adhere to GPPs/ PGGs (SEPA, 2006-2017) and other good practice guidance (Section 11.2), and implement appropriate measures which will include, but may not be limited to: • avoiding unnecessary stockpiling of materials and exposure of bare surfaces, limiting topsoil stripping to areas where bulk earthworks are immediately programmed; • installation of temporary drainage systems/SuDS systems (or equivalent) including pre-earthworks 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	To implement appropriate controls for site runoff and sedimentation and reduce impacts on the water environment.	If flocculants are considered necessary to aid settlement of fine suspended solids, such as clay particles, the chemicals used must first be approved by SEPA. Where required, temporary discharge consents to be obtained from SEPA through the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended).
SMC-W4	Throughout Proposed Scheme	Pre-Construction & Construction	In relation to in-channel working, the Contractor will adhere to GPPs/PPGS (SEPA, 2006-2017) and other good practice guidance (Section 11.2), and implement appropriate measures which will include, but may not be limited to: • undertaking in-channel works during low flow periods (i.e. when flows are at or below the mean average) 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; • 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.	To reduce impacts on the water environment during in-channel working.	Method statements for any in-channel working require approval by SEPA

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
SMC-W5	Throughout Proposed Scheme	Construction	Where channel realignment is necessary, the Contractor will adhere to good practice guidance (Section 11.2) and implement appropriate measures which will include, but may not be limited to: • Once a new channel is constructed, the flow should, where practicable, be diverted from the existing channel to the new course under normal/low flow conditions; • diverting flow to a new channel should be timed to avoid forecast heavy rainfall events at the location and higher up in the catchment (the optimum time will be the spring and early summer months to allow vegetation establishment to help stabilise the new channel banks); • with offline realignments, the flow will be diverted with a steady release of water into the newly constructed realignment to avoid entrainment of fine sediment or erosion of the new channel; and • any proposed realignment works will be supervised by a suitably qualified fluvial geomorphologist.	To reduce impacts on the water environment where channel realignment is proposed.	Consultation with SEPA
SMC-W6	Throughout Proposed Scheme	Construction	In relation to refuelling and storage of fuels, the Contractor will adhere to GPPs/PPGs (SEPA, 2006-2017) and other good practice guidance (Section 11.2), and implement appropriate measures which will include, but may not be limited to: • only designated trained and competent operatives will be authorised to refuel plant; • refuelling will be undertaken at designated refuelling areas (e.g. on hardstanding, with spill kits available, and >10m from water features) where practicable; • appropriate measures will be adopted to avoid spillages (refer to **Mitigation Item SMC-W7** in **Table 21-5**); and • compliance with the Pollution Incident Control Plan (refer to **Mitigation Item SMC-S1** in **Table 21-1**).	To avoid spillages and reduce impacts on the water environment in relation to refuelling.	None required
SMC-W7	Throughout Proposed Scheme	Construction	In relation to oil/fuel leaks and spillages, the Contractor will adhere to GPPs/PPGs (SEPA, 2006-2017) and other good practice guidance (Section 11.2), and implement appropriate measures which will include, but may not be limited to: • stationary plant will be fitted with drip trays and emptied regularly; • plant machinery will be regularly inspected for leaks with maintenance as required; • spillage kits will be stored at key locations on-site and detailed within the Construction Environmental Management Plan (CEMP) (refer to Mitigation Item S1); and • construction activities will comply with the Pollution Incident Control Plan (refer to **Mitigation Item SMC-S1** in **Table 21-1**).	To reduce impacts on the water environment in relation to oil/fuel leaks and spillages.	None required

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
SMC-W8	Throughout Proposed Scheme	Construction	In relation to chemical storage, handling and reuse, the Contractor will adhere to GPPs/PPGs (SEPA, 2006-2017) and other good practice guidance (Section 11.2), and implement appropriate measures which will include, but may not be limited to: • chemical, fuel and oil storage will be undertaken within a site compound, which will be located on stable ground at a low risk of flooding and >10m from any watercourse; • chemical, fuel and oil stores will be locked and sited on an impervious base within a secured bund with 110% of the storage capacity; and • pesticides, including herbicides, will only be used if there are no alternative practicable measures, and will be used in accordance with CAR requirements, the manufacturer's instructions and application rates.	To reduce impacts on the water environment in relation to chemical storage, handling and reuse.	None required
SMC-W9	Throughout Proposed Scheme	Construction	In relation to concrete, cement and grout, the Contractor will adhere to GPPs/PPGs (SEPA, 2006-2017) and other good practice guidance (Section 11.2), and implement appropriate measures which will include, but may not be limited to: • concrete mixing and washing areas will: ➢ be located more than 10m from water bodies; ➢ have settlement and re-circulation systems for water reuse; and ➢ have a contained area for washing out and cleaning of concrete batching plant or ready-mix lorries. • wash-water will not be discharged to the water environment and will be disposed of appropriately either to the foul sewer (with permission from Scottish Water), or through containment and disposal to an authorised site; • where concrete pouring is required within a channel, a dry working area will be created; • where concrete pouring is required within 10m of a water feature or over a water feature, appropriate protection will be put in place to prevent spills entering the channel (e.g. isolation of working area, protective sheeting); and • quick setting products (cement, concrete and grout) will be used for structures that are in or near to watercourses.	To reduce impacts on the water environment in relation to concrete, cement and grout.	Permission required from Scottish Water. Consultation with SEPA.
SMC-W10	Site Compound/ Facilities	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 and discharge agreed with SEPA in advance of construction and in accordance with 'PPG04 Treatment and Disposal of Sewage' (SEPA, 2003 – 2013).	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 water course

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
SMC-W11	Throughout Proposed Scheme	Construction	In relation to service diversions and to avoid damage to existing services from excavations and ground penetration, including temporary severance of public and private water supplies through damage to infrastructure, the Contractor will: • locate and map all private or public water supply assets and other service infrastructure prior to construction; • take measures to prevent damage to services and to avoid pollution during service diversions, excavations and ground works; and • provide a temporary alternative water supply (e.g. bottled or tankered) if services are to be disrupted or diverted by the works.	To mitigate service diversions and disruptions from excavations and ground penetration.	Consultation with SEPA
SMC-W12	Throughout Proposed Scheme	Construction	For works within areas identified as potentially containing contaminated land and sediment the Contractor will reduce the risk of surface water pollution to an acceptably low level through: • further site investigation to determine the level of contamination prior to construction to beginning; • the installation of temporary treatment facilities to enable removal of pollutants from surface waters; and • adoption of mitigation measures relating to contaminated land as outlined in **Table 21-4**.	To reduce risk of surface water pollution from areas identified as potentially contaminated land to an acceptably low level.	Details of any temporary treatment measures to be agreed with SEPA prior to commencement of construction
SMC-W13	Throughout Proposed Scheme	Design	In relation to bank reinforcement, design principles and mitigation measures will adhere to good practice (SEPA, 2008), which will include, but may not be limited to: • non-engineering solutions and green engineering (e.g. vegetation, geotextile matting) to be the preference during options appraisal; • requirements for grey engineering to control/prevent scour (e.g. rock armour, rip-rap, gabion baskets) to be minimised; and • post project appraisal to identify if there are issues that can be investigated and addressed at an early stage.	To reduce impacts of in-channel structures on the water environment.	Consultation with SEPA
SMC-W14	Throughout Proposed Scheme	Design	In relation to outfalls, specimen and detailed design will ensure compliance with good practice (e.g. CIRIA, 2015; The Highways Agency et al., 2004; SEPA, 2008), which will include, but may not be limited to: • directing each outfall downstream to minimise impacts to flow patterns; • avoiding projecting the outfall into the watercourse channel; • avoid installation of outfalls at locations of known historical channel migration; • avoid positioning in flow convergence zones or where there is evidence of active bank erosion/instability; • directing an outfall away from the banks of a river to minimise any potential risk of erosion (particularly on the opposite bank); • minimising the size/extent of the outfall headwall where possible to reduce the potential impact on the banks; and • post project appraisal to identify if there are issues that can be investigated and addressed at an early stage	To reduce impacts of outfalls on the water environment.	Consultation with SEPA

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
SMC-W15	Throughout Proposed Scheme	Design	In relation to watercourse crossings, specimen and detailed design will ensure compliance with good practice (SEPA, 2010), which will include, but may not be limited to: • Detailed design will mitigate flood risk impacts through appropriate hydraulic design of culvert structures. Flood risk will be assessed against the 0.5%AEP (200-year) plus an allowance for climate change design flood event. Detailed design will mitigate any loss of existing floodplain storage volume where required by appropriate provision of compensatory storage. Where culvert extension is not practicable or presents adverse impact on the water environment, appropriately designed replacement culverts may be installed. • Detailed design will mitigate impacts on the water environment through appropriate design of culvert structures and watercourse modifications (e.g. realignments) with respect to fluvial geomorphology, and both riparian and aquatic ecology. • Detailed design of culverts and associated watercourse modifications will incorporate wherever practical: ➢ adherence to design standards and good practice guidance (Section 11.2); ➢ allowance for the appropriate conveyance of water and sediment for a range of flows (including at low flow conditions); ➢ maintenance of the existing channel gradient to avoid erosion at the head (upstream) or tail (downstream) end of a culvert; ➢ avoidance of reduction of watercourse length through shortening of watercourse planform; ➢ minimisation of culvert length; ➢ close alignment of the culvert with the existing water feature; ➢ depressing the invert of culverts to allow for formation of a more natural bed (embedment of the culvert invert to a depth of at least 0.15m to 0.3m); and ➢ roughening of culvert inverts to help reduce water velocities. • Post project appraisal of watercourse crossings will be undertaken to identify if there are issues that can be investigated and addressed at an early stage.	To reduce impacts of culverts on the water environment.	Consultation with SEPA
SMC-W16	Throughout Proposed Scheme	Design & Construction	In relation to channel realignments, specimen and detailed design will ensure compliance with good practice (Section 11.2), which will include, but may not be limited to: • minimising the length of the realignment, with the existing gradient maintained where possible; • design of the realignment in accordance with channel type and gradient; • if required, low flow channels or other design features to reduce the potential for siltation and provide an opportunity to improve the geomorphology of the water feature; • realignment designs will be led by a suitably qualified fluvial geomorphologist; • where realignments result in an increase or decrease of channel gradient, the following principles will be applied: ➢ an increased gradient within the channel (resulting in higher stream energies) will require mitigation in the form of energy dissipation, which could include the creation of a step-pool sequence; boulder bed-checks; plunge pools at culvert outlets; and/or; increased sinuosity; and	To reduce impacts of channel realignment on the water environment.	Consultation with SEPA

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
			➢ a decrease in gradient within the channel will require mitigation in the form of the construction of a low flow channel to minimise the impacts on locally varying flow conditions and reduce the risk of siltation of the channel • Post project appraisal to identify if there are issues that can be investigated and addressed at an early stage.		
SMC-W17	Throughout Proposed Scheme	Design & Construction	In relation to SuDS, the following mitigation measures will be implemented: • detailed design to adhere to design standards and good practice guidance (Section 11.2 of Chapter 11 Road Drainage and the Water Environment), including The SuDS Manual (CIRIA, 2015) and SuDS for Roads (SCOTS, 2010); • for each drainage run, a minimum of two levels of SuDS treatment within a 'treatment train' (see Table 1 of Appendix 11.2 for further details) to limit the volume of discharge and risk to water quality • management of vegetation within ponds and drains through grass cutting, pruning of any marginal or aquatic vegetation (as appropriate to the SuDS component) and removal of any nuisance plants, especially trees; • SuDS retention ponds will be designed with an impermeable liner to maintain a body of standing water and provide treatment volume; • inspect inlets, outlets, banksides, structures and pipework for any blockage and/or structural damage and remediate where appropriate; and • regular inspection and removal of accumulated sediment, litter and debris from inlets, outlets, drains and ponds to avoid sub-optimal operation of SuDS; and • adherence to the maintenance plans specific to each SuDS component type as detailed within The SuDS Manual (CIRIA, 2015)	To reduce impacts of drainage discharges on the water environment.	Where required, authorisation for the road drainage discharge under CAR 2011 (as amended) would be obtained from SEPA

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
Embedded Mitigation					
P07-W1	ch. -700/ west of A9 ch. 300/ west of A9 ch. 400/ west of A9 ch. 4,200/ west of A9 ch. 6,000/ west of A9 ch. 6,300/ west of A9 ch. 6,500/ west of A9 ch. 6,900/ west of A9 ch. 7,700/ west of A9 ch. 8,300/ west of A9 ch. 9,200/ west of A9	Design and Construction	**SuDS basin/ pond** Basins or ponds shall be sized to attenuate and store extreme flood events and restrict outflow to 'greenfield' runoff rates and provide long-term storage[1]; Spillage containment features shall be included in SuDS facilities (emergency shut-off valve chambers on basin outlet); SuDS are to be lined to prevent adverse impacts to groundwater	Water quality treatment to road runoff as well as providing attenuation and storage to offset increased runoff area, reducing potentially adverse hydrological/ flood risk issues.	The Water Environment (Controlled Activities) (Scotland) Regulations (CAR) 2011 authorisation; SEPA consultation/ approval
P07-W2	ch. 100/ west of A9 ch. 2,000/ west of A9	Design and Construction	**SuDS basin/ pond** Enhanced treatment provided by inclusion of a micro-pool and/ or grassed channel (swale) to outfall	Providing additional/ enhanced treatment where required to meet water quality thresholds	SEPA consultation/ approval; CAR authorisation; CNPA consultation
P07-W3	ch. -900/ downstream of Hydro ID -2 ch. 200/ downstream of Hydro ID 1 ch. 210/ downstream of Hydro ID 1 ch. 400/ downstream of Hydro ID 2 ch. 2,050/ downstream of Hydro ID 13 ch. 4,250/ downstream of Hydro ID 36 ch. 6,150/ downstream of Hydro ID 43 ch. 6,400/ River Truim	Design and Construction	**SuDS outfall** Appropriate positioning of SuDS outfalls to minimise scour and erosion of channel bed and banks in line with SEPA guidance. Low velocity SuDS outfall and limited use of scour protection. SuDS outfalls to Major Watercourses to include grassed channels in the design – these will allow for river migration and erosion without affecting the effectiveness of the low	To ensure integrity of structure and natural channel is not compromised and SuDS remain operational.	CAR authorisation; Any outfalls to the River Truim (River Spey SAC) may need SNH approval; SEPA consultation/ approval

[1] 'Long term storage' i.e. to hold back any additional volume of runoff (the difference between the predicted development runoff volume and the estimated greenfield volume) until floodwaters have abated

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
	ch. 6,570/ River Truim ch. 7,000/ downstream of Hydro ID 51 ch. 7,850/ River Truim ch. 8,200/ downstream of Hydro ID 58 ch. 9,300/ downstream of Hydro ID 63/64 ch. 9,900/ on watercourse W8.1		velocity outfall		
P07-W4	ch. 3,020/ upstream of Hydro ID 23 ch. 3,040/ downstream of Hydro ID 23 ch. 3,200/ upstream of Hydro ID 25 ch. 3,300/ downstream of Hydro ID 25 ch. 4,000 to 4,200 west of A9 ch. 4,560 to 4,640 west of A9 ch. 4,770/ west of the A9 ch. 4,900/ west of the A9 ch. 4,950/ downstream of Hydro ID 42 ch. 6,400 to 6,460 west of A9 ch. 6,560 to 6,600 west of A9 ch. 6,950 to 7,000 west of A9 ch. 7,060 to 7,200 west of A9 ch. 7,900/ upstream of Hydro ID 57 ch. 9,150 to 9,270/ upstream of Hydro ID 63 ch. 9,300/ upstream of Hydro ID 64	Design and Construction	**Compensatory storage areas** Compensatory flood storage shall be sized to compensate for loss of 200yr functional floodplain	Included to offset any flood storage volume lost due to encroachments (mainline, access, SuDS) into the functional floodplain and avoid increased flood risk downstream	SEPA consultation/ approval
P07-W5	ch. 0,400/ Hydro ID 2 ch. 3,030/ Hydro ID 23 ch. 7,200/ Hydro ID 52 ch. 8,400/ Hydro ID 59 ch. 9,300/ Hydro ID 64	Design and Construction	**Structures** Bridge abutments set back from river banks to limit amount of erosion and scour protection required	Allow natural migration/ evolution of river morphology, allow natural channel migration and encourage sediment transfer through the catchment without compromising structural integrity; to reduce risk of erosion	CAR authorisation
P07-W6	ch. 3,000 to 3,020 at Hydro ID 23 ch. 3,770/ upstream of Hydro ID 31 ch. 6,980/ upstream of Hydro ID 51	Design and Construction	**Channel restoration** Restoration of natural bed shall be through the removal of concrete channels associated with existing structures	Restoration to more natural river morphology facilitating natural channel migration and encouraging sediment transfer through the catchment	CAR authorisation

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-W7	ch. 0,220/ Hydro ID 1 ch. 0,810/ Hydro ID 4 ch. 0,965/ Hydro ID 5 ch. 1,120/ Hydro ID 6 ch. 1,260/ Hydro ID 7 ch. 1,500/ Hydro ID 8 ch. 1,650/ Hydro ID 10 ch. 1,875/ Hydro ID 12 ch. 2,020/ Hydro ID 13 ch. 2,075/ Hydro ID 14 ch. 2,180/ Hydro ID 15 ch. 2,760/ Hydro ID 21 ch. 2,850/ Hydro ID 22 ch. 3,340/ Hydro ID 28 ch. 3,625/ Hydro ID 30 ch. 3,775/ Hydro ID 31 ch. 3,835/ Hydro ID 33 ch. 3,940/ Hydro ID 34 ch. 4,030/ Hydro ID 35 ch. 4,120/ Hydro ID 35a ch. 4,250/ Hydro ID 36 ch. 4,350/ Hydro ID 37 ch. 4,480/ Hydro ID 38 ch. 4,550/ Hydro ID 39 ch. 4,680/ Hydro ID 40 ch. 4,775/ Hydro ID 41a ch. 4,855/ Hydro ID 41b ch. 4,930/ Hydro ID 42 ch. 6,130/ Hydro ID 43 ch. 6,270/ Hydro ID 44 ch. 6,450/ Hydro ID 45 ch. 6,595/ Hydro ID 46 ch. 6,690/ Hydro ID 47 ch. 6,800/ Hydro ID 49 ch. 6,840/ Hydro ID 50 ch. 6,980/ Hydro ID 51	Design and Construction	**Culverts** Scour pools shall be provided upstream (at the inlet) of steep culverts crossing the A9 mainline (For oversizing of culverts to allow provision of mammal crossing and embedment of culvert invert for inclusion/ development of natural bed material see **Mitigation Items P07-E1**, **P07-E2**, and **P07-E3** in **Table 21-6**)	To dissipate energy and reduce risk of erosion in line with current standards	SEPA consultation/ approval; CAR authorisation

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-W8	ch. 0,220/ Hydro ID 1 AT ch. 0,610/ Hydro ID 3 AT ch. 0,790/ Hydro ID 4 AT ch. 2,020/ Hydro ID 13 AT ch. 2,075/ Hydro ID 14 AT ch. 3,340/ Hydro ID 27 AT ch. 3,445/ Hydro ID 28 AT ch. 3,860/ Hydro ID 33 AT ch. 4,030/ Hydro ID 35 AT ch. 6,810/ Hydro ID 49 AT ch. 7,625/ Hydro ID 56 AT BDL ch. 1,390/ Hydro ID 63 AT BDL ch. 1,420/ Hydro ID 63 AT BDL ch. 1,590/ Hydro ID 61 AT BDL ch. 1,645/ Hydro ID 61 AT	Design and Construction	**Culverts** Scour pools shall be provided upstream (at the inlet) of steep culverts crossing access tracks (AT)	To dissipate energy and reduce risk of erosion in line with current standards	SEPA consultation/ approval; CAR authorisation
P07-W9	ch. 9,850/ west of A9	Design and Construction	**Tank Sewer & Vortex separator** Use of proprietary SuDS where conventional treatment cannot be accommodated due to spatial constraints (in line with the SuDS Manual)	Providing additional/ enhanced treatment where required to meet water quality thresholds.	SEPA consultation/ approval; CAR authorisation
P07-W10	Throughout Proposed Scheme extent – all un-kerbed roads	Design and Construction	All un-kerbed roads to be provided with 'over-edge' drainage via filter drains (or conveyance swales)	Providing source control and first treatment stage	N/A
P07-W11	Access track east of A9 (between Hydro IDs 55 and 71)	Design and Construction	Dispersal trenches on the downstream side of Beauly to Denny Power Line access track	To maintain surface water supply to potentially sensitive habitats	SNH consultation; CNPA consultation

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
Project-Specific Mitigation					
P07-W12	ch. 0,400/ Hydro ID 2 ch. 3,030/ Hydro ID 23 ch. 7,200/ Hydro ID 52 ch. 8,400/ Hydro ID 59 ch. 9,300/ Hydro ID 64	Design and Construction	**Structures** The Contractor shall evaluate the potential of setting back abutments further from river banks to limit amount of erosion and scour protection required by carrying out detailed environmental and engineering assessments during detailed design	Allow natural migration/ evolution of river morphology, allow natural channel migration and encourage sediment transfer through the catchment without compromising structural integrity; to reduce risk of erosion	CAR authorisation
P07-W13	ch. 0,480/ upstream of Hydro ID 2 ch. 1,500/ upstream of Hydro ID 8 ch. 3,030/ upstream of Hydro ID 23 ch. 4,250/ downstream of Hydro ID 35 ch. 4,550/ downstream of Hydro ID 39 ch. 4,700/ downstream of Hydro ID 40 ch. 4,780/ downstream of Hydro ID 40 ch. 4,850/ right bank of River Truim ch. 4,950/ right bank of River Truim ch. 6,300/ downstream of Hydro ID 44 ch. 6,460/ downstream of Hydro ID 45 ch. 6,600/ downstream of Hydro ID 46 ch. 6,700/ downstream of Hydro ID 47 ch. 6,860/ downstream of Hydro ID 50 ch. 7,000/ right bank of River Truim ch. 7,300/ downstream of Hydro ID 52 ch. 7,500/ right bank of River Truim ch. 8,400/ upstream of Hydro ID 59 ch. 9,100/ downstream of Hydro ID 62 ch. 9,300/ downstream of Hydro ID 64 ch. 9,370/ upstream of Hydro ID 64	Design and Construction	**Drainage channel** Outfall at risk of erosion, therefore, design outfall using green engineering to allow for channel adjustment in receiver channel (change in bed and bank position); Low velocity outfall	Reduce potential scour/ erosion around drainage outfalls due to alterations in fluvial processes. Ensure integrity of structure is not compromised and remain operational.	CAR authorisation; CNPA consultation
P07-W14	ch. 3,000/ downstream of Hydro ID 23	Design and Construction	**Channel restoration** Improve/ remove step in bed at NMU crossing and introduce step-pool morphology	Improve channel morphology to a more natural condition and remove existing morphological and aquatic ecological barrier	CAR authorisation

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-W15	ch. 9,350/ upstream of Hydro ID 64	Design and Construction	**Watercourse diversion** Detailed design to investigate and consider possibility of alternative upstream channel alignment. Suggest slope is steepened and/ or channel realigned farther from the top of cutting and fix bank position	Remove the high risk of water flowing down cutting onto road when out of bank flow occurs; Remove erosion risk on the outside bank of channel 64 cutting into the road embankment	CAR authorisation
P07-W16	ch. 9,270 to 9,400 downstream of Hydro IDs 63 and 64	Design and Construction	**Watercourse diversion** Reprofile banks to improve channel stability and reduce excessive incision	Improve channel stability and reduce excessive incision; Will protect SuDS pond and provide ecological improvements	CAR authorisation
P07-W17	ch. 200/ downstream of Hydro ID 1 ch. 1,150/ downstream of Hydro ID 6 ch. 1,700/ downstream of Hydro ID 10 ch. 3,000/ downstream of Hydro ID 23 ch. 4,500/ downstream of Hydro ID 38 ch. 6,890/ downstream of Hydro ID 50 ch. 8,700/ downstream of Hydro ID 61	Design and Construction	**Watercourse diversions** Back fill valley (redundant channel) after watercourse has been diverted into the new channel	Ensure high flows do not overtop into old channel causing erosion/ avulsion/ scour	CAR authorisation
P07-W18	ch. 3,000 between NMU and HML ch. 6,100 right bank of Truim between HML and A9 ch. 6,200 right bank of Truim to the west of A9 ch. 6,300 right bank of Truim to the west of A9 ch. 6,400 right bank of Truim to the west of A9 ch. 6,800 around Balsporran SuDS 069 ch. 9,300 left bank of Allt Coire Bhotie west of A9 ch. 9,300 right bank of Allt Coire Bhotie west of A9	Design, Construction, and Post-construction/ Operation	**Riparian planting** Awareness of flood risk should be taken into account when selecting species for riparian planting in the circa 5m buffer along watercourse channel banks	Avoid potential blockage of downstream crossings from large vegetation species (i.e. fallen trees and branches)	CNPA consultation

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-W19	ch. 400/ downstream of Hydro ID 2 ch. 1,300/ downstream of Hydro ID 7 ch. 1,550/ downstream of Hydro ID 8 ch. 1,900/ downstream of Hydro ID 12 ch. 2,050/ downstream of Hydro ID 13 ch. 2,100/ downstream of Hydro ID 14 ch. 9,300/ downstream of Hydro ID 63 & 64	Design and Construction	**Watercourse diversions** Resection the channel (alter its bed slope and morphology) to create more stable channel	Improve stability of channels and protect road from erosion; Reduce excessive sediment supply	CAR authorisation
P07-W20	ch. 0,400/ Hydro ID 2 ch. 3,030/ Hydro ID 23 ch. 8,400/ Hydro ID 59	Design and Construction	**Channel Restoration** All watercourses crossing the A9 under these structures require step-pool morphology upstream and downstream of the crossing, as well as through the structure itself. Removal and/ or reprofiling of existing engineered banks should also be incorporated at detailed design stage	To dissipate energy and reduce risk of erosion in line with current standards Ensure the channel does not negatively impact sediment continuity through excessive erosion, either in the vicinity of the scheme, or outside the scheme boundary	CAR authorisation
P07-W21	Access track approx. ch. 3,925 – 4,000	Design and Construction	**Access Track** Contractor should investigate potential of lowering access track to further minimise floodplain encroachment on the basis of more detailed GI information.	Reduce volume lost in floodplain and lessen area of compensatory storage required	SEPA consultation/ approval
P07-W22	ch. 7,400 to 7,450	Design and Construction	**Flood relief culverts** Relief culverts (or equivalent measure) to be incorporated into the mainline and visual screening berm design in the vicinity of Drumochter Lodge. There may be a residual loss of floodplain volume, however, with the compensatory storage area already proposed a material increase in flood risk elsewhere is not predicted Compensatory storage area downstream of Hydro ID 113 (ch. 7,060 to 7,200) west of A9 should be designed to account for the effect of the flood relief culverts on displaced floodplain volume upstream of bund	To mitigate increased flood risk identified in the FRA as a result of the Landscape/ Visual bund introduced to the east of the trunk road	SEPA consultation/ approval
P07-W23	ch. 0,400/ Hydro ID 2 ch. 3,030/ Hydro ID 23 ch. 7,200/ Hydro ID 52 ch. 8,400/ Hydro ID 59 ch. 9,300/ Hydro ID 64	Design and Construction	**Structures** Low flow channels designed to take the 1:2 year flow to maintain minimum depth of water	Ensure low flows under bridges for ecological permeability	CAR authorisation

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-W24	ch. 0,400/ at Hydro ID 2 ch. 3,000 to 3,020 at Hydro ID 23 ch. 3,770/ upstream of Hydro ID 31	Design and Construction	**Channel restoration** Restoration of natural bed shall be through the removal of concrete channels associated with existing structures	Restoration to more natural river morphology facilitating natural channel migration and encouraging sediment transfer through the catchment	CAR authorisation
P07-W25	ch. 7,900/ Hydro ID 57 ch. 9,275/ Hydro ID 63 ch. 9,300/ Hydro ID 64	Design and Construction	**Crossings** Retain existing capacity if possible (departure from design standard of conveying 200yr flow) to mitigate impacts identified in the FRA	Utilise existing upstream storage by throttling flow and protecting downstream receptors	CAR authorisation; SEPA consultation/ approval
P07-W26	Multiple discrete locations through the Project 7 Proposed Scheme extent	Design and Construction	**Watercourse Diversions** Ensure that any imported bed material for all diversions is of the same size and geology as the existing and re-use existing bed material where possible and suitable	Encourage re-establishment of natural fluvial form and processes	CAR authorisation; SEPA consultation/ approval
P07-W27	Balsporran carpark	Design and Construction	Use of a cellular system filled with single sized stone and a filter drain which will take the filtered runoff through a further level of treatment before discharging into the Truim	System allows runoff to filter through the surface a pea gravel layer sits below that providing an additional level of treatment.	CAR authorisation; CNPA consultation
P07-W28	ch. 6,200 at access track	Design and Construction	**Encroachment** Contractor should evaluate potential of removing scheme encroachment into functional floodplain of River Truim by carrying out detailed environmental and engineering assessments during detailed design	Offset any flood storage volume lost and avoid increased flood risk downstream	SEPA consultation/ approval
P07-W29	ch. 7,150 to 7,450/ west of A9	Design and Construction	**Access tracks** Contractor should evaluate potential to construct access track in such a way it avoids overland flows and flood route by carrying out detailed environmental and engineering assessments during detailed design	Access track in overland flood route adjacent to Drumochter Lodge	SEPA consultation/ approval
P07-W30	All watercourse diversions throughout the Project 7 Proposed Scheme extent	Design and Construction	**Watercourse Diversions** Create channel with diverse bed and bank morphology suitable for bed slope and evolution into stable channels. Ensure natural channel dimensions are maintained. All watercourse diversions are to have a “low flow” channel, design to accommodation the 1:2 year flows on a site by site basis	To maintain a minimal depth of flow and to allow for natural process and stability of new channels	CAR authorisation
P07-W31	All culverts throughout the Project 7 Proposed Scheme extent	Design and Construction	**Culverts** All culverts are to have a “low flow” channel, design to accommodation the 1:2 year flow on a site by site basis	To maintain a minimal depth of flow and to allow for natural process and stability through culvert	SEPA consultation/ approval; CAR authorisation

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-W32	All watercourse channels throughout the Project 7 Proposed Scheme extent	Design and Construction	**Channel material** All material that is to be placed within the channel (realignment, structure, culvert) should be specified (i.e. grain size and composition) and clearly justified. The calibre and quantity of material should be determined on a site by site basis and this should take into account changes in the energy regime within the river.	To allow the ongoing downstream transfer of sediment	CAR authorisation
P07-W33	All culverts throughout the Project 7 Proposed Scheme extent	Design and Construction	**Culverts** All culverts are to have a scour pool at the outfall	Dissipate energy and reduce risk of scour to structures	SEPA consultation/ approval; CAR authorisation
P07-W34	All culverts throughout the Project 7 Proposed Scheme extent	Design and Construction	**Culverts** Identify and design energy dissipation in culverts on a site by site basis. This could take the form of step-pool like structures, which will also aid in retention of bed material.	Dissipate energy and reduce risk of scour to structures. Aid with sediment retention in culvert.	SEPA consultation/ approval; CAR authorisation

Table 21-6: Schedule of Environmental Commitments – Ecology and Nature Conservation

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
Standard A9 Mitigation					
SMC-E1	Throughout Proposed Scheme	Pre-Construction	Pre-construction surveys will be undertaken to verify and, where required, update the baseline ecological conditions set out in the ES. The scope of the pre-construction surveys will be confirmed with SNH prior to them being undertaken	To update the baseline ecological conditions set out in the ES.	SNH
SMC-E2	Throughout Proposed Scheme	Pre-Construction	Prior to construction a suitably qualified (or team of 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; • undertake or oversee pre-construction surveys for protected species in the areas affected by the proposed scheme; and 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 ES. The ECoW will be a member of the Chartered Institute of Ecology and Environmental Management (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 the employer's ecologist. 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.	To ensure the implementation of the Ecological Management Plan.	Consultation with the relevant salmon fisheries board
SMC-E3	At watercourses throughout Proposed Scheme	Construction	Noise and vibration will be reduced by working back from the river bank where possible or working within a dry area to avoid implications to fish, . In addition, soft-start techniques will be applied to piling work procedures to enable sensitive species to evacuate the area.	To protect fish species from noise and vibration.	None required
SMC-E4	At watercourses throughout Proposed Scheme	Construction	Where areas are required to be temporarily dewatered to permit construction activities, fish will be removed by means of electrofishing and relocated prior to dewatering (SFCC, 2007).	To protect fish species during de-watering of watercourse sections and in-stream works,	CAR Licence approved by SEPA
SMC-E5	At watercourses throughout Proposed Scheme	Construction	Water flow/ passage will be sufficiently maintained to permit movement of all fish species past areas of dewatering and/ or significant alteration of water movement during any construction works within the watercourses. Suitable temporary channels or gravity fed flumes/ pipes may be implemented so that movement between areas of habitat can be maintained. Where any over pumping is required, screens will be used to prevent fish from entering pumps.	To protect fish species during de-watering of watercourse sections and in-stream works.	CAR Licence approved by SEPA
SMC-E6	Throughout Proposed Scheme	Pre-Construction	The Contractor will obtain and comply with the requirements of any protected species derogation licences in respect of works necessary to construct the proposed scheme that are likely to breach applicable conservation legislation. Licensing may the for the UK and/ or European protected species.	To comply with conservation legislation.	SNH

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
SMC-E7	Throughout Proposed Scheme	Pre-Construction & Construction	Tree felling and vegetation clearance to be reduced as far as practicable and undertaken outside the core bird nesting season (01 March to 31 August) to avoid damage or destruction of occupied nests or harm to breeding birds. If this cannot be achieved, works within the core bird nesting season will require an inspection of vegetation to be cleared for nesting birds 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 to 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 or chipping depending on the end purpose of the vegetation, or will be removed from the works area.	To protect habitat and fauna during bird nesting season.	None required
SMC-E8	Throughout Proposed Scheme	Pre-Construction & Construction	Any tree felling will be carried out by experienced contractors to reduce direct mortality of protected species according to agreed felling methods between contractors and the ECoW.	To protect fauna during removal of habitat.	None required
SMC-E9	Throughout Proposed Scheme	Pre-Construction Construction & Post-Construction	Plant and personnel will be constrained to a prescribed working corridor through the use of, where practicable, temporary barriers to minimise the damage to habitats and potential direct mortality and disturbance to animals located within and adjacent to the proposed scheme working corridor.	To protect habitats and fauna.	None required
SMC-E10	Throughout Proposed Scheme	Construction	A construction lighting plan and method statement will be developed by the Contractor. The plan, part of the Species Protection Plans, will detail specific mitigation requirements and taking into account guidance on lighting (e.g. Bat Conservation Trust (2009) and Institution of Lighting Professionals (2011)). The construction lighting design will take into account the need to avoid illuminating sensitive fish and mammal (e.g. for bats, otter and badger) habitats in locations such as: adjacent to watercourses, along woodland edges, and, where there is known activity identified through pre-construction ecological surveys (refer to **mitigation item SMC-E1**). Where this is not possible the Contractor will agree any exceptions with SNH.	To protect sensitive mammal habitats from illumination.	Exceptions to be agreed with SNH
SMC-E11	Throughout Proposed Scheme	Construction	During construction trees will be protected in line with guidelines provided in 'BS 5837 Trees in relation to Construction' (British Standards Institution, 2012). This includes the following: • establishment of Root Protection Areas (RPA) • protective fencing will be erected around the RPA to reduce risks associated with vehicles trafficking over roots system or beneath canopies • selective removal of lower branches of trees to reduce risk of damage by construction plant and vehicles • prevent soil compaction measures • Maintain vegetation buffer strips (where practicable).	To comply with guidelines provided in 'BS 5837 Trees in relation to Construction' (British Standards Institute, 2012).	None required
SMC-E12	Throughout Proposed Scheme	Construction & Post-Construction	Planting will be undertaken to replace any trees that were intended to be retained which are felled or die as a result of construction works. The size, species and location of replacement trees will be approved by Transport Scotland and other relevant stakeholders.	Replacement of trees lost that are to be retained.	Transport Scotland and other relevant stakeholders

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
SMC-E13	Throughout Proposed Scheme	Construction	Trenches, holes and pits will be kept covered at night or provide a means of escape for mammals that may become entrapped. Gates to compound areas will be designated to prevent mammals from gaining access and will be closed at night.	To avoid mammals becoming entrapped in and around compound areas during construction.	None required.
SMC-E14	Throughout Proposed Scheme	Construction	Temporary mammal-resistant fencing will be provided around construction compounds following a specification agreed through consultation with Transport Scotland.	To avoid mammals becoming entrapped in and around compound areas during construction.	Transport Scotland
SMC-E15	Throughout Proposed Scheme	Construction	The Contractor will describe within the CEMP (**mitigation item SMC-S1** in **Table 21-1**) the biosecurity strategy to be implemented for the appropriate treatment of invasive, non-native species (INNS). The strategy will set out appropriate construction, handling, treatment and disposal procedures to prevent the spread of INNS in line with recognised best practice.	To prevent the spread of INNS.	None required
n/a (note)	*Throughout Proposed Scheme*	*Construction*	*Further to the above, the mitigation detailed in **Table 21-5** (Road Drainage and the Water Environment), **Table 21-9** (Air Quality) and **Table 21-10** (Noise and Vibration) will be implemented to protect aquatic and terrestrial habitats and species*	*To protect aquatic and terrestrial habitats and species*	*n/a*
Embedded Mitigation					
P07 – E1	ch. 0,200/ Hydro ID 1 ch. 0,400/ Hydro ID 2 ch. 0,500 ch. 1,500/ Hydro ID 8 ch. 2,020/ Hydro ID 13 ch. 3,000/ Hydro ID 23 ch. 3,775/ Hydro ID 31 ch. 6,145/ Hydro ID 43 ch. 6,980/ Hydro ID 51 ch. 7,200/ Hydro ID 52 ch. 7,900/ Hydro ID 57 ch. 8,400/ Hydro ID 59 ch. 9,300/ Hydro ID 64	Design Construction	Mammal crossings to be provided in the form of a dry ledge or dry pipe culvert (where no watercourse is present) above the 1 in 50 year flood level, for medium sized mammals such as otter, badger, wildcat, red squirrel and pine marten.	To reduce the risk of mortality, allow safe passage of mammals and prevent habitat severance.	None required

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07 – E2	ch. 0,400/ Hydro ID 2 ch. 0,500 ch. 3,000/ Hydro ID 23 ch. 7,550	Design Construction	Mammal crossings to be provided in the form of a dry crossing above the 1 in 50 flood level, large enough for deer crossing provision.	To reduce the risk of deer vehicle collisions, mortality, allow safe passage of mammals and prevent habitat severance.	None required.
P07 – E3	ch. 0,220/ Hydro ID 1 ch. 0,400/ Hydro ID 2 ch. 1,145/ Hydro ID 6 ch. 1,500/ Hydro ID 8 ch. 1,875/ Hydro ID 12 ch. 2,020/ Hydro ID 13 ch. 2,775/ Hydro ID 21 ch. 3,000/ Hydro ID 23 ch. 3,340/ Hydro ID 27 ch. 3,775/ Hydro ID 31 ch. 6,145/ Hydro ID 43 ch. 7,900/ Hydro ID 57 ch. 8,700/ Hydro ID 61	Design Construction	Watercourse/ culvert crossings where natural bed material will be incorporated.	To create suitable hydro-morphological habitat for aquatic species.	None required

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
Project Specific Mitigation					
P07-E4	ch. 3,900 to ch. 3,950 ch. 4,150 to ch. 4,300 ch. 4,450 to ch. 4,950 ch. 6,100 to ch. 7,000 ch. 7,500 to ch. 7,550 ch. 7,750 to ch. 7,850 ch. 8,650 to ch. 8,750 ch. 9,150 to ch. 9,450 ch. 3,750 ch. 7,200 ch. 7,900 ch. 8,400 ch. 9,300	Construction Works avoided: October to February for Atlantic salmon June to July for sea lamprey	Where temporary in-channel works are required in the Spey catchment, sensitive Atlantic salmon spawning season should be avoided (October to February). Percussive construction works should be avoided in proximity to suitable watercourses during sensitive salmon and sea lamprey spawning periods (October to February for Atlantic salmon; June to July for sea lamprey). Should avoidance of works/ works rescheduling not be possible during these seasons, suitable exclusion zones should be defined and implemented through consultation with SNH. Upstream/ downstream permeability should be maintained throughout any in-channel works. Riparian vegetation should be retained where practicable. The Contractor will produce a fish rescue plan to detail working methods and control measures for temporary in-channel working.	To prevent disturbance and mortality to Atlantic salmon and sea lamprey during important life stages and to prevent adverse effects on site integrity to the River Spey SAC.	Consultation with SNH and SFB
P07-E5	Throughout Proposed Scheme	Design Construction	Temporary construction stage SuDS features will comply with current standards: Scottish Planning Policy (SPP), 2014 and Planning Advice Note (PAN) 61: Planning & SUDS; The SuDS Manual, Construction Industry Research and Information Association (CIRIA) C753, 2015 SUDS for Roads, WSP, 2009; Regulatory Method (WAT-RM-08), Sustainable Urban Drainage Systems (SUDS or SUD Systems), Scottish Environment Protection Agency (SEPA), v6, 2014 and Supporting Guidance (WAT-SG-53) Environmental Standards for Discharges to Surface Waters 6, SEPA, 2015 Any within-channel works must adopt appropriate sediment control measures to prevent a reduction in water quality downstream. Sediment control barriers will be used in works areas adjacent to all watercourses to prevent sediment runoff. These barriers will be regularly inspected and maintained; removing large sediment build up and repairing fencing when compromised. **Table 21-5** provides further details on SuDS and sediment control measures, specifically **Mitigation Items SMC-W3**, **SMC-W12** and **SMC-W17**.	To prevent pollution events in the Tay Catchment, and in the Spey Catchment to prevent adverse effects on site integrity to the River Spey SAC and River Garry	Consultation with SEPA

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-E6	ch. 3,800 to the northern tie-in	Design Construction Works avoided: October to June for Atlantic salmon June to July for sea lamprey	To minimise permanent habitat loss, temporary works within the River Spey SAC will be minimised, and any SuDS which outfall directly into the SAC should be designed/ constructed to ensure that fluvial morphology is not altered.	To prevent adverse effects on site integrity on the River Spey SAC	Consultation with SNH and SFB
P07-E7	Throughout Proposed Scheme	Pre-construction	Minimise disturbance of habitats through careful siting of construction compounds and storage of construction materials, particularly avoiding blanket mire and wet heath. The siting of compounds, storage areas and working areas within the land made available (LMA) will be reviewed by the ECoW at the planning stage of the construction works to ensure minimal disturbance on sensitive habitats.	To reduce impact on notable habitats within the temporary works boundary	Consultation with SNH
P07-E8	Throughout Proposed Scheme	Pre-construction Construction	As required, the Contractor will install temporary fencing to demarcate temporary works areas, as well as any sensitive habitats identified by the ECoW.	To minimise loss of notable habitats	N/A
P07-E9	Throughout Proposed Scheme	Pre-construction Construction	The Contractor will minimise disruption to the water environmental through control of sediment and chemical run-off using filter drains, soakaways and oil separators. The use of sediment capture barriers will be in place around all areas of exposed soil/ peat to prevent sedimentation runoff into surrounding habitats. These barriers will be inspected monthly by the site ECoW in areas beyond 10m of a watercourse and weekly within 10m of a watercourse and will be maintained by the Contractor; removing large sediment build up and repairing fencing when compromised. Refuelling and machinery maintenance will only be permitted in designated areas in site compounds with containment facilities to manage leaks and spills. Refer to **Table 21-5**, **Mitigation Item SMC-W3** for more information.	To reduce impact on notable habitats within the temporary works boundary and prevent adverse effects on site integrity of Drumochter Hills SAC and River Spey SAC	N/A
P07-E10	Throughout Proposed Scheme	Pre-construction Construction	A minimum buffer zone of 10m will be in place around watercourses where there are no works currently being undertaken to reduce risk of pollution events or sedimentation. Any works within the 10m buffer zone should be supervised by an ECoW and works should be planned to maintain water flow through the area. This buffer zone will also include areas of flowing surface water such as flushes and springs, which should be marked out and avoided if possible, to prevent loss of hydro-connectivity.	To prevent pollution events in the Tay Catchment, and in the Spey Catchment to prevent adverse effects on site integrity to the River Spey SAC	N/A

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-E11	Throughout Proposed Scheme	Construction	Maintain hydrological connectivity through retention of natural water channels, flushes and wet habitats. Where watercourses require in channel works that requires the alteration of the channel, a temporary watercourse diversion will be built to ensure channel connectivity, the diversion will be supervised by the ECoW and a fish rescue undertaken when the diversion takes place. Refer to **Table 21-5**, **mitigation item SMC-W5** for more information.	To prevent pollution events in the Tay Catchment, and in the Spey Catchment to prevent adverse effects on site integrity to the River Spey SAC	N/A
P07–E12	Throughout Proposed Scheme	Construction	Water quality inspection and monitoring will be in place to allow control of construction site runoff and sedimentation. A visual water quality assessment will be made on all tributaries where in-channel works are required within 10m of the watercourse where turbidity will be monitored as well as any leaks/ spills from construction works. In the event water becomes turbid or a leak/ spill is suspected, all works must cease and the water quality stations reviewed for significant increases. **Table 21-5** should be referenced for further details, specifically **mitigation item SMC-W3**.	To implement appropriate controls for site runoff	N/A
P07-E13	Throughout Proposed Scheme	Construction	The Contractor will develop information presented in the Outline Peat Management Plan (see **Appendix 10.6** (**Volume 2**)), including an update from pre-construction surveys/ activities, to detail the process and control measures for peat excavation, storage and re-use.	To allow the successful reinstatement of peat habitats such as blanket bog and heath habitats	Consultation with SNH and SEPA
P07-E14	Throughout Proposed Scheme	Construction Post-construction	To facilitate the restoration of blanket bog and wet heath in areas which have been impacted by the Proposed Scheme, the water table will be maintained by the blocking of grips and drains by peat turve dams or plastic piling and restriction of grazing in these areas is essential, at least until the vegetation is established again. Temporary fencing and cessation of burning is required to aid vegetation establishment. Mulching and re-seeding should be carried out where suitable to aid the restoration process.	To reduce impact on notable habitats within the temporary works boundary and prevent adverse effects on site integrity of Drumochter Hills SAC	Consultation with SNH and SEPA
P07-E15	ch. 100 to ch. 400	Post-construction	Proposed tree-planting will avoid sensitive peatland habitats, notably blanket bog. Locations and indicative species mixes are as shown on **Environmental Mitigation Drawings 6.1 to 6.7** (**Volume 3**).	To prevent loss of important peatland habitats.	Consultation with CNPA and SNH
P07-E16	Ch. 400 ch. 3,000 ch. 6,100 to ch. 6,800 ch. 9,300	Post-construction	Proposed shrub-planting as cover for otter and any freshwater fish will be undertaken at ch. 400, ch. 3,000, ch. 6,100 to ch. 6,800 and ch. 9,300 upon completion of construction works at these locations (see **Environmental Mitigation Drawings 6.1 to 6.7** (**Volume 3**)).	To mitigate for the loss of otter habitat at ch. 3,000 as well as ch. 6,100 to ch. 6,800, along with providing cover for continued dispersal throughout these watercourses. ch. 6,100 to ch. 6,800 also provides fish sheltering habitats as mitigation for loss of riparian cover from construction works and permanent outfalls	Consultation with SNH and SFB

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-E17	Throughout Proposed Scheme	Pre-Construction Construction & Post-Construction	The Contractor will develop information presented in the Outline Species Protection Plan (see **Appendix 12.12** (**Volume 2**)), including an update from pre-construction surveys/ activities, to detail the works methods, control measures and monitoring requirements for works affecting protected species and their habitats.	To avoid damage or destruction of structures used for temporary shelter or protection; and avoid disturbance to protected species.	Consultation with SNH
P07-E18	Throughout Proposed Scheme	Pre-construction Construction	The Contractor will have regard to the potential for nesting crossbill to be present in coniferous plantation woodlands near Dalnaspidal and Drumochter Lodge. As required, the Contractor will liaise with the ECoW to programme works to avoid impacts on nesting crossbill. Relevant working methods and control measures will be incorporated into the Contractor's Species Protection Plan.	To avoid damage or destruction of active nests and disturbance to breeding birds.	N/A
P07-E19	Throughout Proposed Scheme	Pre-construction Construction	The Contractor will have regard to the potential for nesting merlin to be present within and adjacent to the Proposed Scheme, notably in proximity to historic nest sites. As required, the Contractor will liaise with the ECoW to programme works to avoid impacts on nesting merlin. Relevant working methods and control measures for any merlin that could be affected by any construction activities will be incorporated into the Contractor's Species Protection Plan (e.g. timings of works, temporary exclusion zone, etc.).	To prevent disturbance to breeding merlin and to ensure no adverse effects on site integrity of Drumochter Hills SPA	Consultation with SNH
P07-E20	ch. 600 to ch. 3,000	Pre-construction Construction Between March and August	The Contractor will have regard to the potential for ground-nesting waders in floodplain areas through the Pass of Drumochter. As required, the Contractor will liaise with the ECoW to programme works to avoid impacts on nesting birds. Relevant working methods and control measures will be incorporated into the Contractor's Species Protection Plan (e.g. timings of works, temporary exclusion zone, etc.).	To prevent disturbance to protected and notable waders that are part of the Drumochter Hills SSSI breeding bird assemblage	Consultation with SNH
P07-E21	Throughout Proposed Scheme	Pre-construction Construction	The Contractor will have regard to the potential presence of reptiles within the Proposed Scheme. As required, the Contractor will liaise with the ECoW to programme works to avoid impacts on active reptiles (April to October inclusive) including phased vegetation clearance (to displace animals in adjoining habitats unaffected by construction activities) and avoid storing material/ equipment directly on the ground. Should reptiles be found during clearance works, the ECoW will carefully move them from the works area to a nearby area of quality habitat with suitable linkages to the wider area where they can disperse from construction activities. Dismantling of potential hibernacula shall not be carried out during the hibernation season (e.g. November to March inclusive).	To ensure no reptile mortality during construction	N/A
P07-E22	Throughout Proposed Scheme	Pre-Construction Construction	As far as practicable, the Contractor shall phase works over major watercourse crossings to maintain otter permeability through the road network and minimise potential increase in animal road mortality.	To reduce risk of otter road mortality as a result of working on watercourse crossings where otter would otherwise cross	N/A

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-E23	ch. 200 ch. 400 ch. 500 ch. 1,500 ch. 2,020 ch. 3,000 ch. 3,775 ch. 6,145 ch. 6,980 ch. 7,00 ch. 7,400 ch. 7,900 ch. 8,400 ch. 9,300	Construction Post-construction	To ensure effective use of underpasses, minimum of 100m otter-proof fencing will be provided in advance of the operational stage for crossing where mammal ledges are provided. Deer-proof fencing 500m either side will be incorporated into boundary fencing installed for the crossing of the Allt Coire Mhic-Sith, Dalnaspidal Junction underpass, Allt a' Chaorainn and Balsporran Junction underpass, designed to allow for permeability of small mammals via access culverts and underpasses.	To reduce risk of otter road mortality and DVC	N/A
P07-E24	Throughout Proposed Scheme	Pre-construction Construction	Water vole are present along the western extent of the Proposed Scheme. The Contractor shall acquire an SNH licence in advance of any construction activity, including site clearance, that could affect water vole and their burrows. The SNH licence will detail pre-construction survey findings, relevant working methods and control measures; as well as capture/ release strategies and the locations of any pre-determined receptor sites/ temporary captivity. In addition, the SNH licence will consider exclusion measure relating to predatory species including American mink. The Contractor will have regard to recent studies and current professional guidance (Dean *et al*. 2016) that highlights water vole translocations are generally more successful when carried out in early spring (e.g. March to April inclusive).	To prevent unlawful destruction of water vole burrows and risk of mortality to water vole	Consultation and licence obtained from SNH
P07-E25	Throughout Proposed Scheme	Construction Post-construction	The Contractor will develop information presented in the Outline Habitat Management Plan (see **Appendix 12.11** (**Volume 2**)), including an update from pre-construction surveys/ activities, to detail the works methods, control measures and monitoring requirements for habitat restoration works.	To prevent the loss of notable habitat throughout the Proposed Scheme	Consultation with SNH
P07-E26	Throughout Proposed Scheme	Post-construction	In line with the Control of Woodland Removal Policy and in-conjunction with landscape plans (see Chapter 13), tree planting will take place, in the locations identified within **Environmental Mitigation Drawings 6.1-6.7** (**Volume 3**).	To prevent loss of woodland habitats and encourage woodland regeneration	Consultation with SNH
Project Monitoring Requirements					
P07-E27	Throughout Proposed Scheme	Post-construction	Inspections of mammal ledges and tunnels will be undertaken during operational years. Inspections need to include checking for evidence of use on the lead up to and in and around the ledges. This will include footprints, spraint, feeding remains and any other field signs which will indicate their use.	To determine if structures are being used by target species	N/A

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-E28	Throughout Proposed Scheme	Post-Construction	The Contractor will specify relevant specific monitoring requirements for habitat and species mitigation in the relevant Habitat Management Plan, Species Protection Plan and/ or SNH licence. Long-term monitoring requirements will be agreed between Transport Scotland and the relevant statutory consultees.	To determine if mitigation and/ or habitat restoration is successful	SNH Transport Scotland/ Operating Company

Table 21-7: Schedule of Environmental Commitments – Landscape and Visual

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
Standard A9 Mitigation					
SMC-LV1	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 practicable after sections of work are complete.	To reduce the duration of any landscape and visual impacts.	None required
SMC-LV2	Throughout Proposed Scheme	Pre-Construction & Construction	As far as practicable, plant and material storage areas will be appropriately sited to minimise their landscape and visual impact.	To reduce landscape and visual impact of plant and material storage areas.	None required
SMC-LV3	Throughout Proposed Scheme	Construction	Construction sites will be kept tidy (e.g. free of litter and debris).	To reduce visual impact of construction sites.	None required
SMC-LV4	Throughout Proposed Scheme	Construction	Work during hours of darkness will be avoided as far as practicable, and where necessary, directed lighting will be used to minimise light pollution/ glare. Lighting levels will be kept to the minimum necessary for security and safety.	To reduce light pollution/ glare during night-time working.	None required
SMC-LV5	Throughout Proposed Scheme	Construction	To protect soil quality for the purposes of landscape planting, the following measures will be implemented: • Uncontaminated topsoil for re-use shall be stored in un-compacted mounds no more than 2m in height, and stored separately from subsoil material. Topsoil stripped from areas designated as Ancient Woodland shall be stored separately to all other topsoil and sub-soil material, in un-compacted mounds no more than 2m in height. • Stripped topsoil shall be used in areas of the same proposed vegetation type to utilise the existing natural seed bank. • Subsoil in planting areas shall be replaced after construction and ripped to a minimum of 450 mm prior to topsoiling and planting. • Proposed planting areas in existing arable and pasture land, not subject to construction activity, will be ripped to 600 mm to alleviate compaction.	To protect soil quality for the purposes of landscape planting.	None required
SMC-LV6	Throughout Proposed Scheme	Construction	The construction will be managed such that the loss of any existing woodland, scrub, heath, mire, grassland vegetation, marshland, swamps and isolated trees and shrubs not affected by the permanent works is minimised.	To limit vegetation loss as far as practicable.	None required
SMC-LV7	Throughout Proposed Scheme	Pre-Construction	All existing trees and shrubs not affected by the construction of the permanent works shall be fenced off with a suitable type of temporary fencing in accordance with BS5837. Fencing shall extend to the drip line of the tree canopies (unless otherwise agreed by an arboricultural advisor), and shall be erected prior to any construction activities in that area and shall remain for the entire period of construction in that area.	To protect existing trees and shrubs unaffected by the Proposed Scheme.	None required

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
n/a (note)	*Throughout Proposed Scheme*	*n/a*	*Further to the above, **Mitigation Items SMC-E7** and **SMC-E8** (as detailed in **Chapter 12**) will be implemented to protect vegetation which is identified to be retained.*	*To protect vegetation which is identified to be retained.*	*n/a*
Embedded Mitigation					
P07-LV1	**Level 1 chainages:** Southbound: • ch. 500 to ch. 1,500 • ch. 2,075 to ch. 2,200 • ch. 3,325 to ch. 2,600 • ch. 2,700 to ch. 2,750 • ch. 2,975 to ch. 3,000 • ch. 3,125 to ch. 3,275 • ch. 3,450 to ch. 3,600 • ch. 3,725 to ch. 3,825 • ch. 4,000 to ch. 4,400 • ch. 6,600 to ch. 6,950 • ch. 7,075 to ch. 8,000 • ch. 8,050 to ch. 9,700 Northbound • ch. 200 to ch. 750 • ch. 7,050 to ch. 7,200 • ch. 7,250 to ch. 7,450 • ch. 7,500 to ch. 7,625 **Level 2 chainages:** Southbound: • ch. 000 to ch. 100 • ch. 3,600 to ch. 3,625 • ch. 4,400 to ch. 4,700 Northbound: • ch. 8,400 to ch. 8,500 • ch. 8,925 to ch. 9,450 **Level 3/ Priority chainages, including new embankments above retaining walls:**	Design Construction	**Slope and retaining wall treatment** The whole of the Proposed Scheme is landform sensitive to varying degrees of importance, as landform creates the main interface between the surrounding character and the mainline. Landscape Architects have assisted in setting the slope gradients from the A9 verge to the surrounding land. This assessment and initial design work has identified three levels of landform sensitivity as follows: • Level 1: Slopes where it is appropriate to plant trees/ shrubs/ scrub • Level 2: Open landscapes that have relatively minor topographic variation that only require specification to ensure that the earthworks are softened and reflect the surrounding landform to some extent • Level 3/ Priority Areas: specific locations within landform sensitive areas that will require a detailed specification of slope: See **Mitigation Items P07-LV7, P07- LV8, P07-LV9, P07-LV10, P07-LV11, P07-LV12, P07-LV13, P07-LV16, and P07-LV18** for further information.	To mitigate adverse landscape effects of the Proposed Scheme on the Drumochter and Glen Truim Upper Glen LCAs and LLCAs within Project 7 with excavations/ earthworks/ slopes of natural appearance that blend into the very open surrounding landscape and slopes stabilised with seeding and planting, as shown on the **Environmental Mitigation Drawings 6.1 to 6. 7** in **Volume 3.** To mitigate adverse visual effects of the Proposed Scheme on sensitive receptors/users of the A9, HML railway, CNP, NMU and core paths, cyclists, walkers, and residents, with excavations/ earthworks/ slopes of natural appearance that blend into the very open surrounding landscape and slopes stabilised with planting, as shown on the **Environmental Mitigation Drawings 6.1** to **6.7** in **Volume 3**. Retaining walls will allow the vertical alignment of the Proposed Scheme to be raised to reduce cross section gradients and rock cutting to the east of the carriageway at the pinch point between the BDL, the widened A9, NCN7 and the HML railway, reducing landscape and visual impacts, as shown on the **Environmental Mitigation Drawings 6.1** to **6.7** in **Volume 3**. This approach aligns with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (landscape fit, minimise infrastructure, minimise/ mitigate visual impacts).	Transport Scotland

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
	Southbound • ch. 100 to ch. 400 • ch. 1,500 to ch. 1,850 • ch. 3,250 to ch. 3,400 • ch. 4,700 to ch. 5,350 • ch. 5425 to ch. 5,750 • ch. 5,990 to ch. 6,575 Northbound • ch. 100 to ch. 400 • ch. 200 to ch. 1,250 • ch. 1,550 to ch. 2,100 • ch. 2,100 to ch. 2,450 • ch. 2,450 to ch. 3,000 • ch. 3,25 to ch. 3,125 • ch. 3,175 to ch. 3,450 • ch. 3,800 to ch. 4,100 • ch. 4,200 to ch. 4,950 • ch. 7,425 to ch. 7,550 • ch. 7,650 to ch. 8,400 • ch. 8750 to ch. 8950				
P07-LV2	Northbound ch.000; ch. 100; ch. 300; ch. 400; ch. 2,000; ch. 4,200; ch. 6,000; ch. 6,300; ch. 6,500; ch. 6,900; ch. 7,700; ch. 8,300; ch. 9,200	Design Construction	**SuDS basins** Landscape Architects have influenced the design of the SuDS that form part of the Proposed Scheme – ref. SuDS basins 000, 001, 003, 004, 020, 042, 060, 063, 065, 069, 077, 083 and 092 These have been shaped as best possible to blend into surrounding topography and to look like natural features within this open landscape See **Mitigation Item P07-LV26** for further information	To mitigate adverse landscape impacts of the SuDS basins on the landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions. To mitigate adverse visual impacts of the SuDS basins from sensitive receptors. This approach aligns with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (landscape fit, minimise infrastructure, minimise/ mitigate visual impacts).	Not Applicable

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-LV3	Northbound ch. 725 to 950; ch. 3,450 to 3,750 Southbound ch. 3,875 to 4,050	Design Construction	**Type A Lay-bys** 3 no. Type A Lay-bys within the Proposed Scheme with a wide segregation strip and potential links to NMU routes. The locations are: • northbound at approx. ch. 800 at Dalnaspidal • northbound at approx. ch. 3,600 near Drumochter Pass • southbound at approx. ch. 4,000 near Drumochter Pass See **Mitigation Items P07-LV4, P07-LV5** and **P07-LV6** for further information regarding refinement of Type A Lay-by earthworks.	To provide rest and stopping area with views over adjacent spectacular landscape, to optimise traveller experience, while fitting into the very open surrounding landscape and mitigating adverse impact on landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions. To mitigate adverse visual impacts on the landscape experience, by provision of rest and stopping area with views over adjacent landscape, to optimise traveller experience, while fitting into the very open surrounding landscape and mitigating adverse impact from sensitive receptors/ users. This approach aligns with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (landscape fit, minimise infrastructure, facilitate access, appreciation of this landscape, enjoyment of views).	Not Applicable
Project Specific Mitigation (Additional)					
P07-LV4	Between ch. 800 to 1,100 northbound	Design Construction	**Earthwork / facility refinement:** **Dalnaspidal Northbound Type A Lay-by - extended** Preliminary grading of embankments and path linking to NMU shall be undertaken in accordance with the **Environmental Mitigation Drawings 6.1 to 6.7 in Volume 3.** Further work to retaining walls, viewing platforms, steps and ramps shall be subject to detailed design.	To provide a rest and stopping area with views over the Allt Dubhaig braided channels geological SSSI and glimpsed view of Loch Garry to south west to optimise traveller experience, while complementing the landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions, particularly Dalnaspidal and Allt Dubhaig LLCAs and the settlement of Dalnaspidal and mitigating adverse landscape impacts. To provide a rest and stopping area with views over the Allt Dubhaig braided channels geological SSSI and glimpsed view of Loch Garry to south west to optimise traveller experience, while fitting into the very open surrounding landscape and mitigating adverse visual impact. This approach aligns with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (landscape fit, minimise infrastructure, facilitate access, appreciation of this landscape, enjoyment of views).	TS/ CNPA/ SNH

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-LV5	Between ch. 3,400 to 3,700 northbound	Design Construction	**Earthwork / facility refinement:** **Drumochter Northbound Type A Lay-by – extended** Preliminary grading of embankments and path linking to NMU shall be undertaken in accordance with the **Environmental Mitigation Drawings 6.1 to 6.7 in Volume 3.** Further work to retaining walls, viewing platforms, steps and ramps shall be subject to detailed design.	To provide rest and stopping area with views over Drumochter Pass to the Boar of Badenoch to west to optimise traveller experience, while fitting into the very open surrounding landscape and mitigating adverse impact on landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions, particularly Pass of Drumochter LLCA. To provide rest and stopping area with views over Drumochter Pass to the Boar of Badenoch to west to optimise traveller experience, while fitting into the very open surrounding mitigating adverse visual impact. This approach aligns with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (landscape fit, minimise infrastructure, facilitate access, appreciation of this landscape, enjoyment of views).	TS/ CNPA/ SNH
P07-LV6	Between ch. 3,800 to 4,100 southbound	Design Construction	**Earthwork / facility refinement:** **Drumochter Southbound Type A Lay-by – extended** Preliminary grading of embankments shall be undertaken in accordance with the **Environmental Mitigation Drawings 6.1 to 6.7 in Volume 3**. Further work to paths linking to the NMU, retaining walls, viewing platforms, steps and ramps shall be subject to detailed design.	To provide rest and stopping area with views over the A9 to Drumochter Pass to the Boar of Badenoch to west to optimise traveller experience while fitting into the very open surrounding landscape and mitigating adverse impact on landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions, particularly Pass of Drumochter LLCA. To provide rest and stopping area with views over the A9 to Drumochter Pass to the Boar of Badenoch to west to optimise traveller experience while fitting into the very open surrounding landscape and mitigating adverse visual impact. This approach aligns with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (landscape fit, minimise infrastructure, facilitate access, appreciation of this landscape, enjoyment of views).	TS/ CNPA/ SNH

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-LV7	**Level 1 chainages:** Southbound: • ch. 500 to ch. 1,500 • ch. 2,075 to ch. 2,200 • ch. 3,325 to ch. 2,600 • ch. 2,700 to ch. 2,750 • ch. 2,975 to ch. 3,000 • ch. 3,125 to ch. 3,275 • ch. 3,450 to ch. 3,600 • ch. 3,725 to ch. 3,825 • ch. 4,000 to ch. 4,400 • ch. 6,600 to ch. 6,950 • ch. 7,075 to ch. 8,000 • ch. 8,050 to ch. 9,700 Northbound • ch. 200 to ch. 750 • ch. 7,050 to ch. 7,200 • ch. 7,250 to ch. 7,450 • ch. 7,500 to ch. 7,625 **Level 2 chainages:** Southbound • ch. 000 to ch. 100 • ch. 3,600 to ch. 3,625 • ch. 4,400 to ch. 4,700 Northbound: • ch. 8,400 to ch. 8,500 • ch. 8,925 to ch. 9,450 **Level 3/ Priority chainages:** Southbound • ch. 100 to ch. 400 • ch. 1,500 to ch. 1,850 • ch. 3,250 to ch. 3,400 • ch. 4,700 to ch. 5,350 • ch. 5425 to ch. 5,750	Design Construction	**Slope treatment** As noted within embedded **Mitigation Item P07-LV1**, the whole of Project 7 is landform sensitive to varying degrees of importance. New embankments and cuttings for all level 1, 2 and 3 slopes shall be feathered into the toe/ top of existing gradients at varying profiles to form slopes of natural appearance that integrate into the sensitive landscape context, where indicated on **Environmental Mitigation Drawings 6.1 to 6.7**, contained within **Volume 3** of this report**,** subject to detailed design as additional mitigation. For level 3 priority areas, drawings and specifications for each location shall be produced as part of the contract documents, subject to detailed design. This will detail the desired contours, with cross sections to indicate how these slopes should be constructed. Landscape and visual considerations shall be coordinated with structural engineering and geotechnical advice for design in relation to stability and appearance of retaining walls and rock cuts subject to detailed design.	To mitigate adverse landscape impacts on the landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions, particularly Pass of Drumochter LLCA and to optimise traveller experience while fitting into the very open surrounding landscape and mitigating adverse landscape impact. To mitigate adverse visual impacts and break up the linearity of the retaining wall and reducing its impact from views from the west. This approach is aligned with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (landscape fit, minimise infrastructure, minimise/ mitigate visual impacts).	Transport Scotland

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
	• ch. 5,990 to ch. 6,575 Northbound • ch. 100 to ch. 400 • ch. 200 to ch. 1,250 • ch. 1,550 to ch. 2,100 • ch. 2,100 to ch. 2,450 • ch. 2,450 to ch. 3,000 • ch. 3,25 to ch. 3,125 • ch. 3,175 to ch. 3,450 • ch. 3,800 to ch. 4,100 • ch. 4,200 to ch. 4,950 • ch. 7,425 to ch. 7,550 • ch. 7,650 to ch. 8,400 • ch. 8750 to ch. 8950				
P07-LV8	Southbound: RW1: Ch. 1,000 to 1,120 RW2: Ch. 1,550 to 1,620 RW3: Ch. 1,660 to – 1,730 RW4: Ch. 2,790 to 2,850 RW5: Ch. 2,850 to 2,940 RW6: Ch. 4,880 to 4,930 RW7: Ch. 4,950 to 5,150 RW8: Ch. 5,350 to 5,440 RW10: Ch. 5,750 to 5,950 Northbound: RW9: Ch. 4,950 to 5,820	Design Construction	**Retaining wall treatment** Retaining wall facades shall be faced with a natural stone effect finish. To break up the appearance of the retaining walls, large locally won boulders or blocks of rock will be used at random intervals at the base of the walls reflecting the appearance of natural outcrops. Detailed design drawings and specifications for each location shall be produced as part of the contract documents, and as indicated on the indicated on **Environmental Mitigation Drawings 6.1 to 6.7 in Volume 3 or in Mitigation Item P07-LV1,** subject to detailed design as additional mitigation.	To mitigate adverse landscape impacts on the landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions, particularly Pass of Drumochter LLCA and to break up the linearity of the retaining walls, to optimise traveller experience while fitting into the very open surrounding landscape and mitigating adverse landscape impact. The combined use of materials/ treatment of the extensive retaining walls would diffuse the incongruous appearance of the homogenous concrete retaining walls therefore reducing their impact, and improving their fit within the wider landscape. To mitigate adverse visual impacts by integrating structures and embankments into the adjacent existing landscape to create natural faces indistinguishable from natural rock outcrop and/or textured structural concrete retaining walls mitigating adverse visual impact. This approach is aligned with Appendix **13.3 Section 4, Landscape Objectives of Volume 3** (landscape fit, minimise infrastructure, minimise/ mitigate visual impacts).	Transport Scotland

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-LV9	Between ch. 4,970 to ch. 5,820 northbound safety barrier / retaining wall	Design Construction	**Planting: Retaining wall** Low level shrub planting and seeding shall be planted adjacent to the retaining wall where space allows, subject to detailed design.	To integrate structures and embankments into the adjacent existing landscape to create natural facing indistinguishable from natural rock outcrop to structural concrete retaining walls while fitting into the surrounding landscape, and mitigating adverse landscape impact on the landscape characteristics of the Pass of Drumochter LLCA. To mitigate adverse visual impacts by integrating structures and embankments into the adjacent existing landscape to create natural facing indistinguishable from natural rock outcrop to structural concrete retaining walls while mitigating adverse visual impact. This approach aligns with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (minimise infrastructure, landscape fit, diversify species, replace lost planting, minimise/ mitigate visual impacts).	Not Applicable
P07-LV10	Between approximate ch. 7400 and 7600 northbound and southbound	Design Construction	**Earthworks refinement:** **Drumochter Lodge and Balsporran access underbridge** New embankments and cuttings shall be feathered into the toe/ top of existing gradients at approved profiles to form slopes of natural appearance, where indicated on the **Environmental Mitigation Drawings 6.1** to **6.7** in **Volume 3**.	To mitigate adverse landscape impacts of the new underbridge on the characteristics of Dail A'Chuirn LLCA, with excavations/ earthworks/ slopes that blend into the very open surrounding landscape. To mitigate adverse visual impacts of the new underbridge from sensitive receptors/ users of the A9, HML railway, CNP, NMU and core paths, cyclists, walkers, residents of Balsporran Cottages and Drumochter Lodge, with excavations/ earthworks/ slopes that blend into the very open surrounding landscape and slopes are stabilised with planting. This approach aligns with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (landscape fit; minimise infrastructure, minimise/ mitigate visual impacts).	Not Applicable

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-LV11	Between approximate ch. 7,400 and 7,600 northbound and southbound	Design Construction	**Planting:** **Drumochter Lodge and Balsporran access underbridge** Replacement of native woodland/ scrub/ shrub planting lost through construction of the Proposed Scheme shall be as specified on **Environmental Mitigation Drawings 6.6 in Volume 3.**	To mitigate adverse landscape impacts of the new underbridge on the characteristics of Dail A'Chuirn LLCA, Drumochter Lodge and Balsporran Cottages with mixed native tree planting that blends into the very open surrounding landscape and slopes at as early a stage as possible. To mitigate adverse visual impacts of the new underbridges from sensitive receptors/ users of the A9, HML railway, CNP, NMU and core paths, cyclists, walkers, residents of Drumochter Lodge and Balsporran Cottages with vegetation that blend into the surrounding landscape and slopes are stabilised with planting. This approach aligns with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (minimise infrastructure, landscape fit, diversify species, replace lost planting, screen planting to minimise/ mitigate visual impacts).	Not Applicable
P07-LV12	Between approximate ch. 7,300 and 7,400 southbound	Design Construction	**Earthworks refinement:** **Drumochter Lodge Berm** Berm construction shall be integrated with excavations/ earthworks/ slopes that blend into the very open surrounding landscape and slopes are integrated with existing landform, where indicated on **Environmental Mitigation Drawings 6.1** to **6.7** in **Volume 3**.	To mitigate adverse landscape effects of the new underbridge on the landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions, particularly Dail A'Chuirn LLCA and Drumochter Lodge undesignated designed garden. To mitigate adverse visual impacts of the Proposed Scheme from Drumochter Lodge and to minimise visual impact. This approach aligns with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (landscape fit, respect and refer to cultural heritage, minimise/ mitigate visual impacts).	Not Applicable

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-LV13	Between approximate ch. 7,300 and 7,400 southbound	Design Construction	**Planting:** **Drumochter Lodge Berm** The berm shall be planted with native conifers and shrubs, profiled to integrate with adjacent landform and stone faced retaining feature, subject to detailed design. Woodland/ scrub/ shrub planting lost during construction phase shall be replaced; native woodland species of local provenance to improve biodiversity, landscape fit and visual amenity shall be introduced, where indicated on **Environmental Mitigation Drawing 6.6 in Volume 3.**	To mitigate landscape impacts of the Proposed Scheme on Drumochter Lodge. To mitigate visual impacts of the Proposed Scheme on Drumochter Lodge. This approach aligns with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (diversify species, replace lost planting, respect and refer to cultural heritage, integrate with existing planting, screen planting to minimise/ mitigate visual impacts).	Not Applicable
P07-LV14	Between ch. 800 to 1,100 northbound	Design Construction	**Planting:** **Dalnaspidal Type A Lay-by** A wide range of different native heath, scrub and small tree species of local provenance to improve biodiversity, landscape fit and visual amenity shall be planted subject to detailed design.	To provide a rest and stopping area with views over the Allt Dubhaig braided channels geological SSSI and glimpsed view of Loch Garry to south west to optimise the traveller experience, while complementing the landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions, particularly Dalnaspidal and Allt Dubhaig LLCAs and the settlement of Dalnaspidal. To mitigate visual impacts of the Proposed Scheme while providing a rest and stopping area with views over the Allt Dubhaig braided channels geological SSSI and glimpsed view of Loch Garry to south west to optimise traveller experience, and fitting into the very open surrounding landscape and mitigating adverse visual impact This approach aligns with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (diversify species, replace lost planting, integrate with existing planting, minimise/ mitigate visual impacts, enjoyment of views).	Transport Scotland

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-LV15	Between ch. 3,400 to 3,700 northbound	Design Construction	**Planting:** **Drumochter Northbound Type A Lay-by** A wide range of native heath, scrub and small tree species of local provenance shall be planted to improve biodiversity landscape fit and visual amenity around Drumochter Northbound Type A Lay-by subject to detailed design.	To mitigate adverse landscape impacts of the Proposed Scheme from on sensitive receptors at Drumochter Lodge, blending the berm into the surrounding designed garden while complementing the landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions. To mitigate adverse visual impacts of the Proposed Scheme on sensitive receptors at Drumochter Lodge, blending the berm into the surrounding designed garden. This approach aligns with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (facilitate access, diversify species, replace lost planting, appreciation of this landscape, integrate with existing planting, minimise/ mitigate visual impacts, enjoyment of views).	Transport Scotland
P07-LV16	Between ch. 6,750 to 7,000 northbound	Design Construction	**Earthworks refinement:** **Balsporran access and car park** Embankments around Balsporran access and car park shall be graded to integrate adjacent landscape slopes with excavations/ earthworks/ slopes that blend into the very open surrounding landscape and slopes are stabilised with planting; parking surface shall be granular permeable material on geo-grid, where indicated on **Environmental Mitigation Drawings 6.5 in Volume 3.**	To mitigate adverse landscape impacts of the reinstated car park and access roads on the landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions, particularly Dail A'Chuirn LLCA and Balsporran Cottages and Drumochter Lodge. To mitigate adverse visual impacts of the reinstated car park and access roads on sensitive receptors/ users of the A9, HML railway, CNP, NMU and core paths, cyclists, walkers, residents of Balsporran Cottages and Drumochter Lodge, with excavations/ earthworks/ slopes that blend into the very open surrounding landscape. This approach aligns with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (minimise landscape impacts, appreciation of this landscape, minimise/ mitigate visual impacts, enjoyment of views, facilitate access).	Not Applicable

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-LV17	Between ch. 6,750 to 7,000 northbound	Design Construction	**Planting:** **Balsporran access and car park** A wide range of native grass seeding, heath, scrub and small tree species of local provenance to improve biodiversity, landscape fit and visual amenity shall be planted around Balsporran access and car park to soften and integrate landscape mitigation with wildlife habitat and to restore landscape character. Planting specification shall be subject to detailed design.	To mitigate adverse landscape impacts of the reinstated car park and access roads on the landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions, particularly Dail A'Chuirn LLCA and Balsporran Cottages and Drumochter Lodge. To mitigate the adverse visual impact of the Proposed Scheme on sensitive receptors/ users of the NMU, HML railway, Balsporran Cottages and hillwalkers. This approach aligns with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (integrate with existing planting, minimise visual impacts, enjoyment of views, diversify species, replace lost planting, appreciation of this landscape).	Not Applicable
P07-LV18	Between ch. 200 to 500 northbound and ch. 400 to 600 southbound	Design Construction	**Earthworks refinement:** **Dalnaspidal and Allt Coire Mhic-sith underbridges** New embankments and cuttings shall be feathered into the toe/ top of existing gradients at approved profiles to form slopes of natural appearance, where indicated on the **Environmental Mitigation Drawings 6.1 and 6.2** in **Volume 3**.	To mitigate adverse landscape impacts of the underbridges on the landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions, particularly Dalnaspidal and Allt Dubhaig LLCAs and the settlement of Dalnaspidal. To mitigate adverse visual impacts of the underbridges from sensitive receptors/ users of the A9, HML railway, CNP, NMU and core paths, cyclists, walkers, residents, with excavations/ earthworks/ slopes of natural appearance that blend into the very open surrounding landscape. This approach aligns with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (minimise infrastructure, minimise landscape impacts, appreciation of this landscape, facilitate access, landscape fit, minimise/ mitigate visual impacts).	Not Applicable

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-LV19	Between ch. 200 - 500 northbound and ch. 400 - 600 southbound	Design Construction	**Planting and rockwork:** **Dalnaspidal and Allt Coire Mhic-sith underbridges** Steep gradients of underbridge embankments terraced using site-won rockwork to reflect the form of natural outcrops, subject to detailed design. Planting shall be commenced as early as possible to allow establishment of trees and shrubs in key locations around Dalnaspidal and Allt Coire Mhic-sith underbridges to restore landscape character. Woodland/ scrub/ shrub planting lost through construction of the Proposed Scheme shall be treated by replanting of mixed native broadleaf and conifers as indicated on **Environmental Mitigation Drawing 6.1 in Volume 3** to restore landscape character and improve landscape fit**.**	To mitigate adverse landscape impacts of the underbridges on the landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions, particularly Dalnaspidal and Allt Dubhaig LLCAs and the settlement of Dalnaspidal. To mitigate adverse visual impacts of the underbridges on sensitive receptors/ users of the A9, HML railway, CNP, NMU and core paths, cyclists, walkers, residents, with excavations/ earthworks/ slopes of natural appearance that blend into the very open surrounding landscape. This approach aligns with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (minimise landscape impacts, appreciation of this landscape, diversify species, replace lost planting facilitate access, integrate with existing planting, minimise/ mitigate visual impacts, enjoyment of views).	Transport Scotland
P07-LV20	Approximate ch. 7,400 to 7,600 northbound	Design Construction	**Replanting:** **Drumochter Lodge existing woodland** Replace woodland planting lost opposite Drumochter Lodge, between the A9 carriageway and slip roads and the River Truim with appropriately diverse species of planting. Woodland to the north of Drumochter Lodge (to the east of the carriageway) lost through the Proposed Scheme works will be replaced with pockets of native woodland reflecting local landscape characteristics and types, as indicated on **Environmental Mitigation Drawings 6.5 and 6.6 in Volume 3**, to areas both to the north and south of Drumochter Lodge. Any woodland/ vegetation lost during construction and the maintenance period shall be replaced with native woodland species to restore landscape character as indicated on **Environmental Mitigation Drawing 6.6 in Volume 3.**	To mitigate the landscape impact of the Proposed Scheme on the landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions, particularly Dail A'Chuirn LLCA. Pockets of native woodland planting shall off-set woodland loss on earthworks, to reflect local landscape characteristics and types. To mitigate the visual impact of the Proposed Scheme on users of the NMU, Drumochter Lodge and blend into the surrounding landscape including screening the BDL from the A9. This approach is aligned with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (integrate with existing planting, minimise/ mitigate visual impacts, enjoyment of views, minimise landscape impacts, integrate new tree planting with the existing tree belts, diversify species, and replace lost planting).	Not Applicable

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-LV21	Throughout the Proposed Scheme	Design Construction	**Planting:** **Landscape integration with habitat in floodplains** Appropriate native species woodland under planted by heath along the northbound carriageway embankment and within the River Truim and Allt Dubhaig floodplains shall be planted as indicated on **Environmental Mitigation Drawings 6.1 to 6.7 in Volume 3.**	To screen valuable habitat for wading birds and other species and to reinstate any vegetation removal and reinstatement of the area, mitigate the landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions, particularly Dail A'Chuirn LLCA. To mitigate the visual impact of the Proposed Scheme on valuable habitat for wading birds and other species and on users of the NMU and HML railway. This approach is aligned with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (integrate with existing planting, minimise/ mitigate visual impacts, enjoyment of views, landscape fit, minimise landscape impacts, appreciation of this landscape).	Not Applicable
P07-LV22	Throughout the Proposed Scheme	Design Construction	**Planting:** **Landscape integration with habitat to open heath and embankments** Seeding, heath and scrub planting to the west of the A9 between the A9 verge and HML railway shall be as specified on **Environmental Mitigation Drawings 6.1 to 6.7 in Volume 3.**	To ensure screening of embankments of the Proposed Scheme from on the landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions and integrate with the surrounding landscape To mitigate the visual impact of the Proposed Scheme to ensure screening of embankments of the Proposed Scheme from sensitive receptors/ users of the HML railway, CNP, and wider visual amenity. This approach is aligned with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (integrate with existing planting, minimise/ mitigate visual impacts, enjoyment of views, minimise landscape impacts).	Not Applicable

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-LV23	Throughout the Proposed Scheme	Design Construction	**Planting:** **Landscape integration with existing coniferous woodland** Where necessary, reinstatement of coniferous woodland with varied mix of native species including coniferous and broadleaf trees and shrubs shall be carried out based on natural vegetation growth patterns and integration of new broadleaf planting into existing shelterbelts where indicated on **Environmental Mitigation Drawings 6.1 – 6.7 in Volume 3**	To mitigate adverse landscape impacts of the Proposed Scheme on the landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions and to integrate with habitat. To mitigate adverse visual impacts of the Proposed Scheme on sensitive receptors/ users of the HML railway, CNP, NMU, cyclists, walkers, users of the wider landscape including screening the BDL from the A9, and to integrate with the wider visual amenity. This approach is aligned with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (integrate with existing planting, minimise/ mitigate visual impacts, enjoyment of views, minimise landscape impacts).	Not Applicable
P07-LV24	Throughout the Proposed Scheme, but mainly on the eastern side of the carriageway	Design Construction	**Planting:** **Mitigation of plantation shelterbelts** Appropriate native species woodland, under planted by native mix heath, along the east road embankment shall be planted in affected areas to limit risk of wind throw and further damage to remaining trees, where indicated on **Environmental Mitigation Drawings 6.1 – 6.7 in Volume 3**	To provide mitigation of any new shelterbelts and to also reinstate vegetation removal, to mitigate the impact of the Proposed Scheme on the landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions and habitat. To provide mitigation of any new shelterbelts and to also reinstate vegetation removal, to mitigate the visual impact of the Proposed Scheme on users of the NMU and HML railway and integrate with the surrounding visual amenity. This approach is aligned with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (integrate with existing planting, minimise/ mitigate visual impacts, enjoyment of views, diversify species, minimise landscape impacts).	Not applicable

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-LV25	Throughout Proposed Scheme	Design Construction	**Planting:** **Embankments/ cut slopes** Where possible embankments of a suitable gradient should be treated with locally excavated peaty top soil and cut turves supplemented by appropriate local provenance seeding and mixed species vegetation. Planting design shall be as indicated on **Environmental Mitigation Drawings 6.1 to 6.7 in Volume 3**	To mitigate adverse landscape impacts of the Proposed Scheme on the landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions and habitat. To mitigate adverse visual impacts of the Proposed Scheme from sensitive receptors/ users of the wider landscape including screening the BDL from the A9. **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (minimise infrastructure, minimise/ mitigate visual impacts, enjoyment of views, diversify species, integrate with existing planting, minimise landscape impacts).	Not Applicable
P07-LV26	Northbound ch.000; ch. 100; ch. 300, ch. 400; ch. 2,000; ch. 4,200; ch. 6,000; ch. 6,300; ch. 6,500; ch. 6,900; ch. 7,700; ch. 8,300; ch. 9,200	Design Construction	**Suds basins design refinement** Embankments of 13 no. SuDS basins –. 000, 001, 003, 004, 020, 042, 060, 063, 065, 069, 077, 083 and 092 Landscape Architects have influenced the design of the SuDS basins that form part of the Proposed Scheme as detailed in embedded **Mitigation Item P07-LV2.** Further design shall integrate SuDS basins with roadside slopes (including slopes to access tracks) at SuDS basins 000, 001, 003, 004, 020, 042, 060, 063, 065, 069, 077, 083 and 092. SuDS basins are landform sensitive and shall look as natural as possible to blend into surrounding, very open, landscape. Appropriate seeding and planting is required as specified on **Environmental Mitigation Drawings 6.1-6.7(Volume 3).**	To mitigate adverse landscape effects of the SuDS basins from sensitive receptors of the LCA, LLCAs, landscape features and landscape perceptions. To mitigate adverse visual impacts of the SuDS basins from sensitive receptors/ users of the A9, HML railway, CNP, NMU and core paths, cyclists, walkers, residents, with excavations/ earthworks/ slopes of natural appearance that blend into the very open surrounding visual. This approach is aligned with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (landscape fit, minimise landscape impacts, minimise/ mitigate visual impacts, enjoyment of views).	Not Applicable

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-LV27	Throughout Proposed Scheme	Design Construction	**Planting:** **SuDS basin slopes and drainage features** Planting should be as indicated on **Environmental Mitigation Drawings 6.1-6.7 in Volume 3** of this report. Locally excavated surface vegetation turves, supplemented with wet grass species shall be planted to SuDS basins, drainage channels and compensatory storage areas to blend with locally adjacent habitats. Seeding and scrub planting shall be used to soften SuDS basin excavations/ earthworks/ slopes and drainage features to integrate landscape mitigation with adjacent habitat features.	To mitigate adverse landscape impacts of the SuDS basins on the landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions, particularly Drumochter Pass LCA. To mitigate adverse landscape impacts of the SuDS basins on visual amenity from sensitive receptors/ users. This approach is aligned with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (minimise infrastructure, minimise/ mitigate visual impacts, enjoyment of views, diversify species, integrate with existing planting).	Not Applicable
P07-LV28	Throughout Proposed Scheme	Design Construction	**Road signage/ furniture** Specification of signs, fences, barriers and other roadside furniture will be carefully considered as part of the detailed design for the Scheme. Fencing and barriers in particular will require ongoing design review as will minimisation of roadscape features such as signs and barriers at more open areas, such as the Drumochter Pass lay-bys.	To ensure reduced effects of the Proposed Scheme on the characteristics of the LCA, LLCAs, landscape features and landscape perceptions, and to ensure they do not obscure landscape features or degrade perception. These items are expected along a road scheme of this nature, however minimising them to the necessary requirements will help with the enjoyment of the high-quality landscape. These items are expected along a road scheme of this nature, however minimising them shall avoid unnecessary clutter or visual intrusion to minimise visual impact on users of the A9. This approach is aligned with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (minimise infrastructure, minimise landscape impacts, minimise/ mitigate visual impacts, enjoyment of views, appreciation of this landscape).	Not Applicable

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07-LV29	Throughout Proposed Scheme	Design Construction	**Natural Finish – Dalnaspidal Underbridge** The western façade of the new underbridge may be faced with a natural stone finish to reflect the appearance of existing General Wade Bridge (viewpoint 4 in Chapter 14, NN 64655 73527, Dalnaspidal Old Bridge, to be demolished), where indicated on **Environmental Mitigation Drawing 6.1 in Volume 3.**	To ensure that the abutment faces will be finished in a manner that is appropriate to their landscape sensitivity. To ensure that the abutment faces will be clad in a manner that is appropriate to their visual sensitivity to NMU users This approach aligns with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (minimise landscape impacts, appreciation of this landscape, respect, minimise/ mitigate visual impacts, enjoyment of views, respect/ refer to cultural heritage assets.	Transport Scotland
Project Specific Monitoring					
P07-LV30	Throughout Proposed Scheme	Design Construction Post-construction	**Monitoring:** **All mitigation measures** All landscape and visual mitigation items (where indicated on **Environmental Mitigation Drawings 6.1 – 6.7** in **Volume 3** of this report) shall be monitored during the agreed contract maintenance period, and appropriate remedial actions shall be taken where landscape and visual mitigation fails to establish, in specific regard to: o earthworks, rock cutting, and retaining wall mitigation measures o planting/seeding of acid and wet grassland, dry and wet heath o scrub, shrub, woodland edge and woodland planting Monitoring will assess planting selection/techniques and long-term landscape planting management, including fencing and vegetation protection against sheep, cattle, wild fauna, pest infestation, and horticultural practice, particularly to prevent damage to planting during the establishment period. Monitoring will also include assessment of existing woodland health and stability, and removal and replanting of woodland edge to ameliorate wind throw in conifer shelterbelts, as explained further within **Appendix 6.1 and 13.3 (Volume 2)**, and where indicated on **Environmental Mitigation Drawings 6.1 – 6.7** in **Volume 3** of this report, in conjunction with the Outline Peat Management Plan (OPMP, refer to **Mitigation Item P07-G9** in **Chapter 10**) and Outline Habitat Management Plan (OHMP, refer to **Mitigation Item P07-E25** in **Chapter 12**). All monitoring shall be subject to detailed specification.	To inform management and maintenance strategies so slopes, retaining walls, cuttings, vegetation and trees are well maintained and that planting becomes established, mitigating adverse landscape impacts of the Proposed Scheme on the landscape characteristics of the LCA, LLCAs, landscape features and landscape perceptions and habitat. To ensure the effectiveness of mitigation works in mitigating adverse visual impacts of the Proposed Scheme on the wider visual amenity. This approach aligns with **Appendix 13.3 Section 4, Landscape Objectives of Volume 3** (all items).	Transport Scotland CNPA SNH

Table 21-8: Schedule of Environmental Commitments – Cultural Heritage

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
Standard A9 Mitigation					
SMC – CH1	Throughout the Proposed Scheme	Construction	The Contractor will consult with the relevant local authority and Transport Scotland's historic environment advisor should any archaeological or cultural heritage finds or sites be discovered or revealed during construction to enable appropriate measures to be implemented to mitigate potential impacts.	To enable appropriate mitigation measures to be implemented to mitigate impacts on assets found during construction.	Relevant Local Authority and Transport Scotland's cultural heritage advisor. HES if affecting Scheduled Monument, Category A Listed Building, Historic Battlefield or Garden & Designed Landscape
Embedded Mitigation					
P07 – CH1	Asset 7.13	Design Construction / Operation Phase	Sensitive slope design with input from a Landscape Architect is proposed at Drumochter Lodge (Asset 7.13) and its designed landscape and Balsporran access underbridge as outlined in **P07-LV1** and **P07-LV10** in **Table 21-7**. .	To reduce and mitigate visual impacts on Drumochter Lodge	
Project Specific Mitigation					
P07 – CH3	Throughout scheme	Pre-construction and construction	The preferred mitigation for archaeological remains is preservation *in situ*. The preferred mitigation for historic buildings is non-destructive. Where this is not feasible, a programme of preservation by record must be undertaken.	To ensure heritage assets are mitigated appropriately.	
P07 – CH4	Throughout scheme	Pre-construction	To mitigate potential impacts on previously unknown archaeological remains, archaeological works and recording shall be implemented in consultation with THC's Historic Environment Team, the PKHT and HES.	To ensure unknown archaeological assets are mitigated appropriately.	THC Historic Environment Team and PKHT
P07 – CH5	Assets 7.1, 7.9, 7.11 and 7.13	Construction	The areas defined as requiring an archaeological watching brief shall be determined in consultation with THC Historic Environment Team and PKHT.	Preserve assets by record.	THC Historic Environment Team and PKHT
P07 – CH6	Assets 7.4, 7.17, 7.19 and 7.26.	Pre-construction	To mitigate the impacts on Dalnaspidal Bridge (Asset 7.4), Dubhaig Bridge (Asset 7.17), Chuirn Bridge (Asset 7.19) and Bhotie Bridge (Asset 7.26), Historic Building Recording (Enhanced) will be carried out in line with *Historic Building Recording Guidance* (ALGAO: Scotland 2013) and in accordance with *Understanding Historic Buildings: a guide to good recording practice* (Historic England, 2016) in order to preserve the existing structure by record.	Preserve the assets by record.	

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
P07 – CH7	Asset 7.4	Construction	To create continuity with Dalnaspidal Bridge (Asset 7.4) due to its removal as part of the Proposed Scheme, stone cladding to the western façade of the new underbridge, that may have been salvaged from Dalnaspidal Bridge (viewpoint 4 in Chapter 14, NN 64655 73527) may be recycled for inclusion within the elevation/ façade of the new underbridge superstructure, supplemented by additional stone as necessary as outlined in **Mitigation Item P07-LV29** in **Table 21-7**.	To create historic continuity with heritage asset.	Transport Scotland
P07 – CH8	Assets 7.21 and 7.22	Pre-construction and construction	To mitigate the impacts on shieling huts Assets 7.21 and 7.22, earthwork surveys will be undertaken in accordance with the guidance provided in *Understanding the Archaeology of Landscapes: A Guide to Good Recording Practice* (Historic England, 2017) and targeted excavation shall be carried out.	Preserve the assets by record.	
P07 – CH9	Asset 7.23 and 7.24	Pre-construction	To mitigate the impacts on turf bank (Asset 7.23) and possible bank (Asset 7.24), earthwork surveys will be undertaken in accordance with the guidance provided in *Understanding the Archaeology of Landscapes: A Guide to Good Recording Practice* (Historic England, 2017) with a date retrieved from the bank.	Preserve the assets by record.	
P07 – CH10	Asset 7.18	Construction and Operation Phase	To mitigate the impacts on Drumochter Lodge (Asset 7.18) and its garden, replacement of woodland/ woodland edge planting lost through construction of the Proposed Scheme shall be carried out as outlined in P07-LV11 and P07-LV13 and as specified on the Environmental Mitigation Plan **Drawings 6.1** to **6.7 (Volume 3)**. The berm construction shall be integrated with existing landform and vegetation as outlined in **Mitigation Item P07-LV12** in **Table 21-7**. During the Operational Phase, planting of natural vegetation during maintenance and management as specified shall mimic the visual appearance of growth patterns in adjacent areas where appropriate. Historic Building Recording (Basic) will be carried out in line with *Historic Building Recording Guidance* (ALGAO: Scotland 2013) and in accordance with *Understanding Historic Buildings: a guide to good recording practice* (Historic England, 2016) in order to preserve the existing structure by record, including the ha-ha. Consideration will be given to retaining the stonework from the ha-ha to re-use on the embankment.	To reduce the potential visual and physical changes to the asset and to preserve the assets current setting by record	THC Historic Environment Team
P07 – CH11	Throughout scheme	Construction and Operation Phase	To mitigate the impacts on HLT1 rough grazing, sensitive slope design with input from a Landscape Architect is proposed as outlined in **Mitigation Item P07-LV1** in **Table 21-7**. Appropriate native species planting to integrate the Proposed Scheme with the landscape shall be carried out as outlined in **Mitigation Items LV21-LV25** in **Table 21-7** and as specified on **Environmental Mitigation Drawings 6.1 to 6.7** (**Volume 3**).	To reduce the potential impacts on the historic landscape.	THC Historic Environment Team

Table 21-9: Schedule of Environmental Commitments – Air Quality

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
Standard A9 Mitigation					
SMC-AQ1	Throughout Proposed Scheme	Construction	In relation to minimising fugitive dust emissions from earthworks, material storage and concrete batching the following mitigation items will be implemented: • stockpiles and mounds will be at a suitable angle of repose to prevent material slippage, will be enclosed or securely sheeted, and/ or kept damped as necessary during dry weather; • the surfaces of any long-term stockpiles which give rise to a risk of dust or air pollution will be covered with appropriate sheeting or will be treated to stabilise the surfaces; • mixing of large quantities of concrete will be carried out only in enclosed or shielded areas; • all handling areas will be maintained in a dust free state as far as is practicable with sprinklers and hoses used to prevent dust escaping from the site boundaries; and • procedures will be established so that the site is regularly inspected for spillage of dusty or potentially dusty materials and any such spillage would be dealt with promptly where necessary to prevent dust nuisance.	To reduce fugitive dust emissions from earthworks, material storage and concrete batching.	None required
SMC-AQ2	Throughout Proposed Scheme	Construction	In relation to minimising dust from vehicle movements within the site the following mitigation items will be implemented: • the Contractor will employ appropriate measures, such as covering materials deliveries or loads entering and leaving the construction site by a fixed cover or sheeting appropriately fixed and suitable for the purposes of preventing materials and dust spillage; • where unsurfaced routes are identified as creating dust emissions during periods of dry weather, surfaces will be regularly dampened down using water bowsers; and • appropriate speed limits will be established and enforced over all unmade surfaces.	To reduce dust from vehicle movements.	None required
SMC-AQ3	Throughout Proposed Scheme	Construction	In relation to appropriate cleaning of public roads the following mitigation items will be implemented: • the edges wheel washing facilities will be installed as required and heavy vehicles will be required to use the facilities prior to leaving the site; • subject to approval from Transport Scotland and the network operator, public roads immediately outside the site entrance will be cleaned using vacuum sweeper brushes and other specialised road cleaning equipment as necessary to maintain an appropriate state of cleanliness; and • roads and footpaths adjacent to the Proposed Scheme will be cleaned, with damping if necessary.	To reduce potential of dust from public roads	Approval required from the Roads Authority
Project Specific Mitigation					
P07-AQ1	-500 to 9,741	Construction	In relation to preparing and maintaining the site, the following additional mitigation item will be implemented: Plan site layout so that machinery and dust causing activities are located as far as possible from receptors. This is particularly relevant around the Dalnaspidal Junction where the greatest number of receptors are located.	Ensuring the site layout minimises the risk of dust emissions.	

Table 21-10: Schedule of Environmental Commitments – Noise and Vibration

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Purpose/ Objective	Specific Consultation or Approval Required
Standard A9 Mitigation					
SMC-NV1	Throughout Proposed Scheme	Pre-Construction & Construction	A scheme of noise and vibration monitoring will therefore be agreed with the Environmental Health Department, and noise and vibration limits will be contained within the CEMP (refer to **Mitigation Item SMC-S1** in **Table 21-1**). The contractor will be required to develop and implement a Noise and Vibration Management Plan to meet these requirements. The assessment will include the design of any necessary NSR specific construction mitigation over and above the standard mitigation included within this ES chapter.	To predict the noise and vibration levels during the construction of the Proposed Scheme. It will include the design of receptor specific mitigation, over and above the standard mitigation detailed in **Mitigation Item SMC-NV2** in **Table 21-10**, where required.	The relevant Local Authority Environmental Health Officer
SMC-NV2	Throughout Proposed Scheme	Pre-Construction & Construction	Best Practicable Means will be used 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; • any work outside of normal working hours will be agreed with the relevant local authority; • 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; • permanent noise mitigation measures such as acoustic screens and earthwork bunds are to be constructed as early as practical; • 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. A method of noise measurement would be agreed with the local authority prior to the commencement of site works; • 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 practicable, vehicles and mechanical plant used for the purpose of the works will be fitted	To reduce, as far as practicable, the level of noise to which operators and others in the vicinity of site operations would be exposed.	Local Authority if any working outwith normal working hours

Mitigation Item	Approximate Chainage/ Location	Timing of Measure	Description	Purpose/ Objective	Specific Consultation or Approval Required
			with effective exhaust silencers and will be maintained in good, efficient working order; • 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 5228:2009+A1:2014' and the guidance given therein minimising noise emissions from the site. In addition, the Local Authority would be consulted regarding any proposed working out-with normal working hours.		
n/a (note)			*In addition to the above, standard **Mitigation Item SMC-S3** in **Table 21-10** will also mitigate potential for noise disturbance through the overall communications strategy for the A9 Dualling Programme and appointed Community Liaison Officer and liaison team.*		
Embedded Mitigation					
P07-NV1	Throughout Proposed Scheme	To be laid during road construction	There will be an improvement in the A9 road surface. The majority of the existing A9 is surfaced with Hot Rolled Asphalt (HRA). The A9 is being resurfaced as part of the Proposed Scheme design, and the new pavement will utilise a Lower Noise Surface (LNS). In Do-Minimum 2041 and Do-Something scenarios for both 2026 and 2041 it is assumed that the A9 will have been resurfaced with the LNS for the length of the Proposed Scheme	Reduce Road Traffic Noise	None

Table 21-11: Schedule of Environmental Commitments – Materials

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
Standard A9 Mitigation					
SMC–M1	Throughout Proposed Scheme	Pre-construction and construction	Prior to construction a Site Waste Management Plan (SWMP) will be developed as part of the CEMP (see **Mitigation Item SMC-S1** in **Table 21-1**) to set out how all construction phase materials will be managed and it will be updated regularly during the construction of the proposed scheme. The SWMP will identify, identify, prior to the start of construction works, 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. The SWMP will include specific materials management and soil management plans developed under voluntary and industry regulated Codes of Practice including: • Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (DEFRA, 2009); • Land Remediation and Waste Management Guidelines (SEPA, 2009); and • Promoting the Sustainable Re-use of Greenfield Soils in Construction (SEPA, 2010). • Appropriate waste minimisation and associated KPI targets will also be included.	To set out how all construction phase materials will be managed.	Consultation and approval from the Local Authority and/ or SEPA as applicable to regulatory requirements
SMC–M2	Throughout Proposed Scheme	Pre-construction and construction	The Contractor will comply with all relevant waste legislation in relation to waste handling, storage, transport and disposal (e.g. The Waste Framework Directive) and consultation with SEPA for advice on waste practice, licences and exemptions where appropriate.	To ensure waste handling, storage, transport and disposal is compliant with all relevant waste legislation.	Consultation with SEPA
SMC–M3	Throughout Proposed Scheme	Pre-construction and 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 off-site with disposal the final option, with clear justification of options provided.	To reduce waste generation, maximise re-use of site-won materials on-site and reduce the need for disposal of waste.	None required
SMC–M4	Throughout Proposed Scheme	Pre-construction and construction	The Contractor will implement Zero Waste Scotland's Design for Resource Efficient Construction Principles.	To make the best use of materials, over the lifecycle of the proposed scheme's built assets, to reduce embodied carbon emissions	None required

Item Ref.	Approximate Chainage/ Location	Timing of Measure	Description	Mitigation Purpose/ Objective	Specific Consultation or Approval Required
SMC–M5	Throughout Proposed Scheme	Pre-construction and construction	The key material elements (i.e. aggregates, asphalt, cement, precast concrete products, ready-mixed concrete and steel) used within the proposed scheme shall be specified to be responsibly sourced.	To reduce impacts associated with the extraction and manufacture of materials.	None required
SMC–M6	Throughout Proposed Scheme	Pre-construction and construction	All timber and timber products shall be sourced from independently verifiable legal and sustainable sources. .	To reduce impacts associated with the extraction and manufacture of materials.	None required
SMC–M7	Throughout Proposed Scheme	Design, Pre-construction and construction	Alternatives to primary aggregates shall be investigated, including opportunities to use recycled or secondary aggregates in the construction of the proposed scheme; either sourced from construction, demolition and excavation waste obtained on-site or off-site; or secondary aggregates obtained from a non-construction or post-consumer or industrial by-product 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
n/a (note)	*n/a*	*n/a*	*Further to the above, the following mitigation items detailed in Table 21.2 (Community and Private Assets), Table 21.4 (Geology, Soils and Contaminated Land), Table 21.5 (Road Drainage and the Water Environment) and Table 21.9 (Air Quality) will be implemented to ensure the appropriate management and handling of materials: Mitigation Items SMC-CP8, SMC-G3, SMC-G8, SMC-G9, SMC-G11, SMC-G15, SMC-W2, SMC-W6 to SMC-W10, SMC-AQ1 and SMC-AQ2.*	*To ensure the appropriate management and handling of materials.*	*n/a*