18 Schedule of Environmental Commitments

18.1 Introduction

All mitigation measures identified in the Environmental Statement necessary to protect the environment prior to or during construction, or during operation of the proposed scheme will be incorporated into the Method Statements and the Contractor's Environmental Management System (EMS). These tools, along with the contents of the Environmental Statement provide a mechanism to ensure compliance with environmental commitments. In particular, legal and other environmental requirements will be defined, and responsibilities and requirements will be established to ensure, firstly, their implementation; secondly, monitoring procedures to check their implementation; and thirdly, any specific consultation requirements to ensure that mitigation measures are implemented and adhered to properly.

18.2 Schedule of Environmental Commitments

The purpose of the Schedule of Environmental Commitments (Table 18.1) is to collate mitigation measures identified throughout the Environmental Statement for ease of reference. It provides a record of commitments that the Contractor will be obliged to adhere to throughout the Contract period, although it is recognised that there may be a need to revise or supplement the commitments by agreement between the successful Contractor, SBC / TS and other interested parties. Specifically, the following are tabulated:

- the specification of the mitigation measure;
- the objective of mitigation;
- the location and timing of the mitigation;
- any monitoring requirements; and
- any consultation required.

Should the Contractor propose significant changes or modifications to the proposed scheme assessed for this EIA, this would mean that the impacts could be different and therefore mitigation measures to address these impacts may change and therefore require further revision, identification and implementation. If this is the case, the contractor will be required to publish an addendum to the Environmental Statement, within which appropriate impacts and mitigation measures will be laid out. This addendum will include a revised Schedule of Environmental Commitments to reflect any changes. The revised commitments will then be included in the appropriate Method Statements and EMP. The final design will not give rise to impacts which are any worse than those described in this Environmental Statement unless a subsequent addendum is issued for consultation.

It should be noted that the Schedule of Environmental Commitments provides a summary of outline mitigation measures developed at this stage in the design process.

The measures outlined in Table 18.1 may require further specification during the detailed design stage. Both operational and construction stage impacts are considered under each environmental parameter and therefore a separate Disruption due to Construction heading has not been included in the table.

Table 18.1 does not include commitments identified or agreed upon as part of Accommodation Works. The exact nature of these accommodation works are yet to be agreed with the relevant landowners / tenants as a separate process. However, where Accommodation Works have been identified within the Environmental Statement for mitigation reasons as well as for Accommodation Works, these have been included within the table.

Table 18.1. Schedule of Environmental Commitments.

Ref. No.	Mitigation Measure	Objective of Mitigation	Location and Timing of Mitigation Measure	Monitoring Requirements	Additional Consultation Required
Air Quality					
AQ1	Damping down of public roads / footpaths.	Dust control	Whole site, during construction phase.	Monitored on site during construction as part of EMS and activity specific method statements.	As required with SBC EPO / SEPA
AQ2	Use of wheel wash facilities	Dust control	As required during construction phase.	Monitored by contractor on site during construction, as part of EMS and activity specific method statements.	As required with SBC EPO / SEPA
AQ3	Best practice working measures in accordance with 'Control of dust from construction and demolition activities' (BRE, 2003)	Dust control	Whole site, during construction phase.	Monitored on site during construction as part of EMS and Method Statements.	As required with SBC EPO / SEPA
Cultural Heritage					
C1	Careful scheme alignment to avoid impact upon features of cultural heritage value.	Avoid loss / damage of sites.	Pre- and during the construction period.	N/A	HS as required.
C2	Pre-construction archaeological evaluation work (including digging of trial trenches carried out by a suitably qualified archaeological contractor	Avoid damage / disturbance to undiscovered or unrecorded features / record existing information.	Prior to construction works (in advance of the letting of the road construction contract) within new areas of	Any mitigation required resulting from evaluation work will be identified and incorporated into contract documentation / method	TS/HS to agree programme of archaeological evaluation.

Ref. No.	Mitigation Measure	Objective of Mitigation	Location and Timing of Mitigation Measure	Monitoring Requirements	Additional Consultation Required
	appointed by HS).		land take, including the footprint of road proposals adjacent to the A68, new side road, junctions and access tracks.	statements.	
C3	Fencing off of sensitive cultural heritage areas prior to the start of construction	Prevent unnecessary disturbance / damage and inform staff of location.	Prior to the start of construction.	N/A	N/A
C4	Archaeological monitoring of any works causing subsurface disturbance / excavation and recording of new features.	Recording and excavation of any unknown cultural heritage features.	As required during any subsurface activities through whole construction period.	As required by a qualified archaeologist.	HS / TS if required.
C5	Inclusion of 'Special Requirements' provided by HS into contract documentation and implementation.	Protect cultural heritage interests.	Throughout the construction period.	As part of EMS / Method Statements.	N/A
Land Use					
L1	Minimisation of land take.	To minimise the loss / disturbance of land during and after construction.	Whole scheme, during detailed design and construction.	Monitored on site. Specific details to be included in Method Statements.	Liaison between Contractor and landowner, as required.
L2	Re-use of excavated agricultural soils in earth mounding and	To reinstate the land to its original condition as far as	Whole scheme, during detailed design and	N/A	N/A

Ref. No.	Mitigation Measure	Objective of Mitigation	Location and Timing of Mitigation Measure	Monitoring Requirements	Additional Consultation Required
	landscape mitigation.	possible.	construction / landscaping.		
L3	Restoration of disturbed areas to original use wherever possible.	To maintain existing land use as far as possible.	Whole scheme, during detailed design and construction / landscaping.	N/A	N/A
L4	Compensation for the loss of land and the relocation of existing access arrangements.	To ensure that landowners do not suffer financially due to temporary or permanent loss of land / severance.	Whole scheme, whenever land is required on a temporary or permanent basis, during construction, operation and maintenance. New access must be available before existing access is stopped up.	N/A	Negotiation between TS and the landowner.
L5	Provision of access tracks to provide access to fields previously accessed directly off A68 (with agreement of landowner / occupier). Provision of access to Riggsyde	Minimise loss of land / severance to land and properties.	During construction before loss of existing access points.	N/A	Negotiation between TS and the landowner during agreement of Accommodation Works.

Ref. No.	Mitigation Measure	Objective of Mitigation	Location and Timing of Mitigation Measure	Monitoring Requirements	Additional Consultation Required
	to be provided by contractor prior to severance of existing access.				
Ecology and Nature Conservation					
E1	Biodiversity enhancement proposals will be appropriate to the local area by using planting guidelines available from the Forestry Commission.	To maximise biodiversity value.	Entire scheme, during detailed design and construction.	N/A	N/A
E2	Adequate pollution prevention measures will be required to be put in place in close consultation with SEPA. Locate material storage compounds away from watercourses. Containment and treatment of surface water run-off high in suspended solids prior to discharge to any watercourse. Additionally a Pollution Incident Response Plan will be put in place as part of the EMS.	To ensure water quality is maintained, reduce risk of pollution.	Along scheme length, at key locations, during construction.	Regular monitoring of watercourses and SUDS features during construction. Details to be included in Method Statements.	SEPA
E3	Application of Construction Method Statement produced as	Minimise impacts upon the SAC/SSSI and fish / otter /	Pre and during construction works.	Transport Scotland Ecological Clerk of Works to oversee /	SNH / SEPA / Transport Scotland

Ref. No.	Mitigation Measure	Objective of Mitigation	Location and Timing of Mitigation Measure	Monitoring Requirements	Additional Consultation Required
	part of the Appropriate Assessment process including – Prevention of in-river works between December and the end of June, provision of free passage to fish at all times, receipt of CAR licence and adherence of licence conditions, adequate pollution prevention measures and appropriate methods and timings.	aquatic plants and habitats.		advise on site activities.	Ecological Clerk of Works
E4	Containment and treatment of construction site and road surface water run-off prior to discharge to any watercourse, through use of SUDS (filter drains, swales, detention ponds and reed bed).	To reduce risk of pollution and ensure water quality/habitats and species not detrimentally affected.	Receiving watercourses, during operation.	Regular monitoring of watercourses and SUDS features during operation. Details to be included in Method Statements.	SEPA.
E5	Minimise permanent land take and retain as much vegetation as possible through sensitive scheme design.	To minimise loss of habitat and disturbance to species.	Entire scheme, during detailed design and construction.	Monitored on site during site preparation and construction activities. Details to be included in Method Statements.	N/A
E6	Minimise temporary land take through sensitive scheme	To minimise loss of habitat and disturbance to sensitive	Entire scheme, during detailed design and	Monitored on site during site preparation and construction	Reference to best practice

Ref. No.	Mitigation Measure	Objective of Mitigation	Location and Timing of Mitigation Measure	Monitoring Requirements	Additional Consultation Required
	design, definition and fencing off working corridor. Restrict movement of work force and heavy machinery to working corridor during construction. Best practice construction methods (minimise noisy activities, directional lighting, dust suppression techniques).	areas and species.	construction.	activities. Details to be included in Method Statements.	guidelines.
E7	Installation of otter ledge along north side of the Annfield Bridge abutment (appropriately designed) with entrance and exit ramps and covered with a layer of Astroturf to aid lamprey migrations.	To aid passage of otter and fish upstream / downstream along Headshaw Burn during all flow conditions.	Annfield Bridge, during detailed design and construction. To be in place and fully functioning prior to substantial completion and signed off by Transport Scotland Ecological Clerk of Works.	Pre-construction baseline fish survey and Post-Construction fish surveys to monitor fish population.	Tweed Commissioners / SNH / Transport Scotland Ecological Clerk of Works
E8	Installation of badger tunnel on D47/5, with fencing for 100m either side of carriageway on either side of tunnel.	To minimize mammal road traffic accidents (RTAs).	To be in place and fully functioning prior to substantial completion and signed off by the	Maintenance programme to ensure no blockages and tunnel is functioning. Fencing to be inspected for damage and breach points.	SNH / Transport Scotland Ecological Clerk of Works

Ref. No.	Mitigation Measure	Objective of Mitigation	Location and Timing of Mitigation Measure	Monitoring Requirements	Additional Consultation Required
			Transport Scotland Ecological Clerk of Works.		
E9	Where possible site clearance to be undertaken between September and end of February (i.e. out with the bird breeding season).	To minimise disruption to breeding bird species.	Entire scheme, prior to site clearance.	Monitored on site during site clearance and construction activities. Details to be included in Method Statements.	Transport Scotland Ecological Clerk of Works
E10	Reinstate the beds and banks of watercourses to an agreed standard.	To minimise disturbance to the beds and banks of watercourses and sensitive species.	All watercourses affected, during/post-construction.	Monitored on site during construction activities and post-construction/restoration. Details to be included in Method Statements.	Transport Scotland Ecological Clerk of Works
E11	Erect combined otter/badger fencing following standard fencing design specification, 100m either side of the underpass and Annfield bridge and in between (on either side of the carriageway) to channel mammals through bridge and underpass and not allow access on to A68. Drawings and specification to be produced and incorporated into contract	To minimise mammal road traffic accidents (RTA's).	Annfield Bridge / underpass, fully completed prior to substantial completion and signed off by Transport Scotland Ecological Clerk of Works.	Monitoring program to be set up, with visits to mammal mitigation after 4 weeks, six months and one year after road completion. Initial inspection immediately prior to substantial completion to ensure full completion and acceptance of fencing (to be signed off by Transport Scotland Ecological Clerk of	SNH / Transport Scotland Ecological Clerk of Works

Ref. No.	Mitigation Measure	Objective of Mitigation	Location and Timing of Mitigation Measure	Monitoring Requirements	Additional Consultation Required
	documentation.			Works.	
E12	Planting of broadleaved trees along soft estate and appropriate wetland mixes within SUDS facilities, riparian trees along bank of Headshaw Burn at Annfield Bridge (as per Figures 9.2 – 9.4).	Habitat Enhancement.	Whole scheme, during design development and construction.	N/A	SNH / Tweed Commissioners.
E13	Pre-construction protected species surveys for otter, badger and water vole.	To ensure legislative requirements are met and identify changes since completion of DMRB Stage 3. To confirm or otherwise the breeding status of identified otter holt.	500m either side of scheme extents. During suitable survey season immediately prior to any construction works.	N/A	N/A
E14	Pre-felling checks of trees and other built structures suitable for roosting by bats (by an experienced bat worker).	To prevent unlawful disturbance or damage to bat species and their roosts.	Pre-construction (maximum lapse time of 48 hours before felling takes place)	N/A	If roosts/bats located, consultation and licence required from Scottish Government
E15	Pre-construction surveys to check for non-native invasive plant species including a check	To ensure legal requirements are met in terms of removal / spread of invasive plant	Prior to construction works – whole site and riparian habitat at	N/A	SNH / SEPA / TS Ecological Clerk of Works if invasive

Ref. No.	Mitigation Measure	Objective of Mitigation	Location and Timing of Mitigation Measure	Monitoring Requirements	Additional Consultation Required
	of Annfield Bridge.	species.	Annfield Bridge.		plants identified.
E16	Protective fencing to be erected around otter holts within 30m of scheme (Headshaw Burn) and appropriate mitigation developed / licence obtained from Scottish Government.	To minimise potential for damage or disturbance to holt during construction and meet legal requirements.	At holts within 30m of scheme and also where disturbance to otter is likely (i.e. for full site).	Monitored on site during site clearance and construction activities. Details to be included in Method Statements.	SNH / Scottish Government / Transport Scotland Ecological Clerk of Works
E17	Trenches left unattended overnight to be either covered or ramped in one location to prevent mammals becoming trapped.	To ensure otter and badger can exit trenches.	Wherever trenches occur.	Monitored on site during construction. Details to be included in Method Statements.	Transport Scotland Ecological Clerk of Works / SEPA
E18	Reporting of any mammal road casualties to Ecological Consultant for investigation and development of safeguard strategies.	To ensure protection of protected species.	Whole site, during construction.	N/A	N/A
Landscape Effects					
LE1	Widening of the existing A68 to follow the existing road alignment. New side road to follow existing hedgerow, fenceline and valley floor.	Prevention of adverse effects at source.	A68 and Riggsyde access, during detailed design and construction works.	N/A	N/A
LE2	Additional planting of riparian / native species by the burn at the	To reduce the overall landscape impacts.	D47/5 Carfrae junction.	N/A	N/A

Ref. No.	Mitigation Measure	Objective of Mitigation	Location and Timing of Mitigation Measure	Monitoring Requirements	Additional Consultation Required
	re-aligned D47/5 Carfrae Junction, on the embankment to the east of the proposed scheme and between the embankment opposite Riggsyde and the improved C84 Oxton junction.				
LE3	Improvement of the hedgerow planting along the road and the extension of the lime tree avenue to the C84 Oxton Junction.	Compensation for the loss of hedgerows.	Carfrae roundabout to C84 Oxton Junction / adjacent to the A68.	N/A	N/A
LE4	Consideration of how to achieve best fit with the contours; retention and best use of existing vegetation; protection of nearby properties; avoidance of the loss or damage to landscape elements such as hedges, River Tweed SAC and valued landform.	Reduction of landscape impact.	Whole scheme, during detailed scheme design and construction.	N/A	N/A
LE5	Following the principles of 'Cost Effective Landscaping: Learning from Nature' and planting of non-native species and use of	To ensure all mitigation measures are effective, represent best value and make a positive contribution	Whole site, during design development and construction / landscaping.	N/A	N/A

Ref. No.	Mitigation Measure	Objective of Mitigation	Location and Timing of Mitigation Measure	Monitoring Requirements	Additional Consultation Required
	native grass/wildflower seed.	to the character and biodiversity of the landscape surrounding the site.			
LE6	Development of a planting design using native species to meet specific mitigation objectives.	For screening, preservation and enhancement of the landscape characte, views and biodiversity.	Whole site, during and post construction and maintenance period.	Monitoring of planting survival rates and health condition to be included.	SNH / SBC
LE7	Retention of existing vegetation where possible.	To minimise adverse visual impact.	Whole site, during design development and construction / landscaping.	N/A	N/A
LE8	Limitation of the size and extent of working and storage areas.	To minimise adverse visual impact.	Whole site, during design development and construction / landscaping.	N/A	N/A
LE9	Ensure good housekeeping of the construction site and storage areas, keeping the site tidy and free of litter and debris as far as is possible.	To minimise adverse visual impact.	Whole site, during design development and construction / landscaping.	N/A	N/A
LE10	Use of temporary floodlighting where necessary and the lights orientated away from receptors.	To minimise adverse visual impact.	Whole site, during design development and construction / landscaping.	N/A	N/A
Traffic Noise and Vibration					

Ref. No.	Mitigation Measure	Objective of Mitigation	Location and Timing of Mitigation Measure	Monitoring Requirements	Additional Consultation Required
T1	Programming of works to be undertaken during normal working hours.	Minimisation of disturbance to sensitive receptors.	Whole site, during design development and construction.	Through site audits.	N/A
T2	Nearby residents to be informed of duration and expected noise intensity when completion of work is out with normal working hours.	Minimisation of disturbance to sensitive receptors.	Whole site, during design development and construction.	Through site audits.	SBC / residents / landowners
T3	Adherence to the noise levels below the standard thresholds set by SBC Environmental Health Officer.	Minimisation of disturbance to sensitive receptors.	Whole site, during design development and construction.	Through site audits.	SBC EHO
T4	Particularly noisy activities to be undertaken outside of recognised breeding seasons for sensitive/protected species.	Minimisation of disturbance to sensitive receptors.	Whole site, during construction.	Through site audits.	SNH
T5	Commitment to minimisation of noise and vibration levels during the course of the works through EMS and Method Statements.	Minimisation of disturbance to sensitive receptors.	Whole site, during design development and construction.	Through site audits.	N/A
Pedestrians, Cyclists, Equestrians and Community					
P1	Construction of a pedestrian, cyclist and equestrian underpass at D47/5 & C83 Junctions with A68.	To continue provision of a link between the D47/5 & C83; to provide a safer crossing for	D47/5 & C83 junctions with the A68, during construction.	N/A	N/A

Ref. No.	Mitigation Measure	Objective of Mitigation	Location and Timing of Mitigation Measure	Monitoring Requirements	Additional Consultation Required
		recreational/community users.			
P2	Accommodation Works for affected landowners.	To facilitate movement of stock and minimise severance.	To be agreed with landowners / tenants	N/A	Landowners / tenants / SBC
P3	Fencing off works and providing clear signage to avoid any users from entering restricted areas.	Ensures safety to pedestrians, cyclists and other community users passing through during construction.	Whole scheme, during and prior to construction.	N/A	N/A
P4	Provision of designated temporary access routes where appropriate.	Ensures safety to pedestrians, cyclists and other community users passing through during construction.	Whole scheme, during and prior to construction.	N/A	N/A
Vehicle Travellers					
V1	Appropriate earthworks, including minimal cut and fill slopes where practicable.	To decrease changes in views from the road and ensure that the scheme blends in with the surrounding landscape as quickly as possible.	Whole scheme, during and prior to construction.	N/A	N/A
V2	Appropriate seeding and landscaping of earthworks to reflect local/surrounding	To decrease changes in views from the road and ensure that the scheme	Whole scheme, during and prior to construction.	N/A	N/A

Ref. No.	Mitigation Measure	Objective of Mitigation	Location and Timing of Mitigation Measure	Monitoring Requirements	Additional Consultation Required
	vegetation.	blends in with the surrounding landscape as quickly as possible.			
V3	Replacement and additional planting of hedgerows, roadside vegetation and creation of tree screens where appropriate.	To decrease changes in views from the road and ensure that the scheme blends in with the surrounding landscape as quickly as possible.	Whole scheme, during and prior to construction.	N/A	N/A
V4	Replacement planting for any mature trees that are lost to the scheme (two at Riggsyde) or minimisation of tree felling.	To decrease changes in views from the road and ensure that the scheme blends in with the surrounding landscape as quickly as possible.	Whole scheme, during and prior to construction.	N/A	N/A
V5	Limiting the size and extent of working areas; installation of advanced warning signs and a traffic management system to maintain a continuous flow of traffic on the A68; good housekeeping of the construction site and storage areas; notification to local radio stations and media to make	To minimise the impact upon driver stress that construction traffic and works will temporarily cause.	Whole site, during construction.	N/A	Local radio stations / media.

Ref. No.	Mitigation Measure	Objective of Mitigation	Location and Timing of Mitigation Measure	Monitoring Requirements	Additional Consultation Required
	public aware of the delays that may be expected; and use of temporary floodlighting as necessary.				
Road Drainage and the Water Environment					
RD1	Incorporation of SEPA's 'Special Requirements' within contract documentation and EMS / Method Statement documents.	To ensure compliance with the Water Framework Directive and to protect the A1 water classification of the local watercourses and River Tweed SAC.	Whole site, during scheme design and construction.	N/A	SEPA
RD2	Appropriate storage for on-site materials to prevent potentially contaminating spillage events.	To ensure compliance with the Water Framework Directive and to protect the A1 water classification of the local watercourses and River Tweed SAC.	Whole site, during construction.	Checks to ensure facilities are working and in order / cleaned out.	N/A
RD3	Provision of temporary silt traps, containment bunds and storage reservoirs of adequate size, in order to prevent sediments entering local watercourses and to minimise soil erosion.	To ensure compliance with the Water Framework Directive and to protect the A1 water classification of the local watercourses and River Tweed SAC.	Whole site, during construction.	Checks to ensure facilities are working and in order / cleaned out.	N/A
RD4	Provision of clearly defined 'no access' areas indicated on site	To ensure compliance with the Water Framework	Whole site, during construction.	N/A	N/A

Ref. No.	Mitigation Measure	Objective of Mitigation	Location and Timing of Mitigation Measure	Monitoring Requirements	Additional Consultation Required
	plans and on site adjacent to sensitive watercourses e.g. Headshaw Burn, Leader Water.	Directive and to protect the A1 water classification of the local watercourses and River Tweed SAC.			
RD5	Creation and implementation of Contingency Plans in case of a spillage or emergency.	To ensure compliance with the Water Framework Directive and to protect the A1 water classification of the local watercourses and River Tweed SAC.	Whole site, during construction.	N/A	SEPA
RD6	Appropriate engineering techniques and timings adopted for the extension of the Annfield Bridge, as identified in approved Construction Method Statement.	To prevent adverse scouring, protect water quality, protect fish during spawning/breeding seasons, meet with Controlled Activities licence and allow fish/otter passage.	Annfield Bridge, during construction.	N/A	SNH and SEPA.
RD7	Construction of earthwork embankments and soakaways for the D47/5 re-alignment	To drain the D47/5 and control flooding of the A68, caused by Headshaw Burn.	D47/5 Re-alignment	N/A	SEPA/SNH
RD8	Development of Sustainable Urban Drainage Systems (SUDS) incorporating over the edge filter drains, swales and detention ponds.	Minimise potential drainage / water quality impacts.	Whole site, during detailed design, construction and operation.	N/A	SEPA

Ref. No.	Mitigation Measure	Objective of Mitigation	Location and Timing of Mitigation Measure	Monitoring Requirements	Additional Consultation Required
RD9	Compliance with SEPA's PPG 01, 05, 06, 21 and 22. Compliance with CAR licence and CAR guidelines.	Minimise potential drainage / water quality impacts.	Whole site, during detailed design, construction and operation.	N/A	N/A
Geology and Soils					
G1	Limitations to the extent and location of working and storage areas.	To minimise the disturbance to the geological and soil attributes of the overall area.	Whole site, during construction.	N/A	N/A
G2	Implementation of erosion and sediment controls.	To minimise the disturbance to the geological and soil attributes of the overall area.	Whole site, during construction.	N/A	N/A
G3	Appropriate handling and storage of soil (with appropriate covering from adverse weather).	To minimise the disturbance to the geological and soil attributes of the overall area.	Whole site, during construction.	N/A	SEPA
G4	Re-use of excavated materials in the landscaping of road verges wherever possible.	To minimise the disturbance to the geological and soil attributes of the overall area.	Whole site, during construction and landscaping.	N/A	N/A
G5	Additional soil procurement to be obtained from local sources where practical.	To ensure no change in the geology and soil attributes of the area.	Whole site, during construction and landscaping.	N/A	N/A