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Environmental Impact Assessment Record of Determination

A702 80 Westwater

Bridge Refurbishment and Scour Protection Works

Contents

Project Details

Description

BEAR Scotland has been commissioned by Transport Scotland to carry out bridge refurbishment, scour remediation and river training works at the A720 80 Westwater Bridge. In early January 2023, extreme weather and flooding led to the foundations and wingwalls of the bridge to become undermined, and emergency works were authorised to protect the structure. Emergency works included realignment of the watercourse, installation of temporary rock armour and installation of a concrete collar around the abutment and wingwalls. A permanent solution is required to formalise the emergency works undertaken, which will include:

Bridge Refurbishment Works:

- Extended masonry repairs (to parapets, wingwalls, buttresses, and soffit),
- Improvements to road drainage,
- Stabilisation of the road embankment, including earthworks and installation of erosion protection system e.g. Geoweb,
- Resurfacing and road marking works,
- Vegetation clearance and tree cutting (if required), and
- Installation of a concrete retaining wall on the top of the road embankment.

River Training and Scour Works:

- Installation of a dry-working area and over-pump/gravity pump,
- Installation of a concrete slab (400 mm thick) across the structure,
- Installation of river embankment protection either with the use of stone (rip rap) or greener methods,
- Extensive earthworks to the riverbed (especially upstream), including an upstream step/pool sequence to be formed with loose rock and straightening of West Water.

The works are currently programmed to be completed within the 2024/2025 financial year. Works are expected to be completed over six months with the in-river works occurring over a 10-week period with works commencing in June 2024 (predominantly daytime working, there may be some potential for night works to undertaken carriageway resurfacing etc.). Traffic Management (TM) will be required in the form of two-way temporary traffic lights. Occasional road closures will also be required intermittently for material delivery and changing of TM. There are no pedestrian routes with connectivity to the scheme extents. However, informal equestrian routes along the banks of Westwater may be temporarily blocked during construction.

Location

The scheme is located on the A702 80 Westwater Bridge, which lies approx. 1km southwest of West Linton, with agricultural land surrounding the scheme (Figure 1).

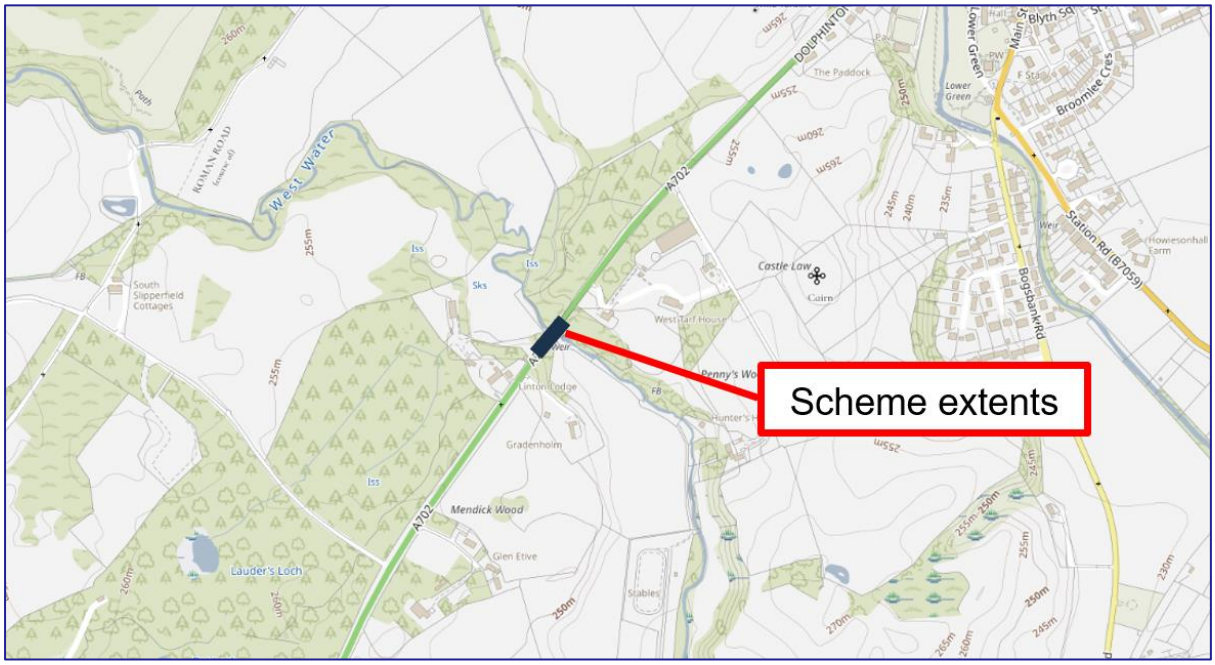

Figure 1. Extent of works. Source: Asset Management Performance System (AMPS). © Europa Technologies Ltd. Contains Ordnance Survey data © Crown copyright and database right 2018.

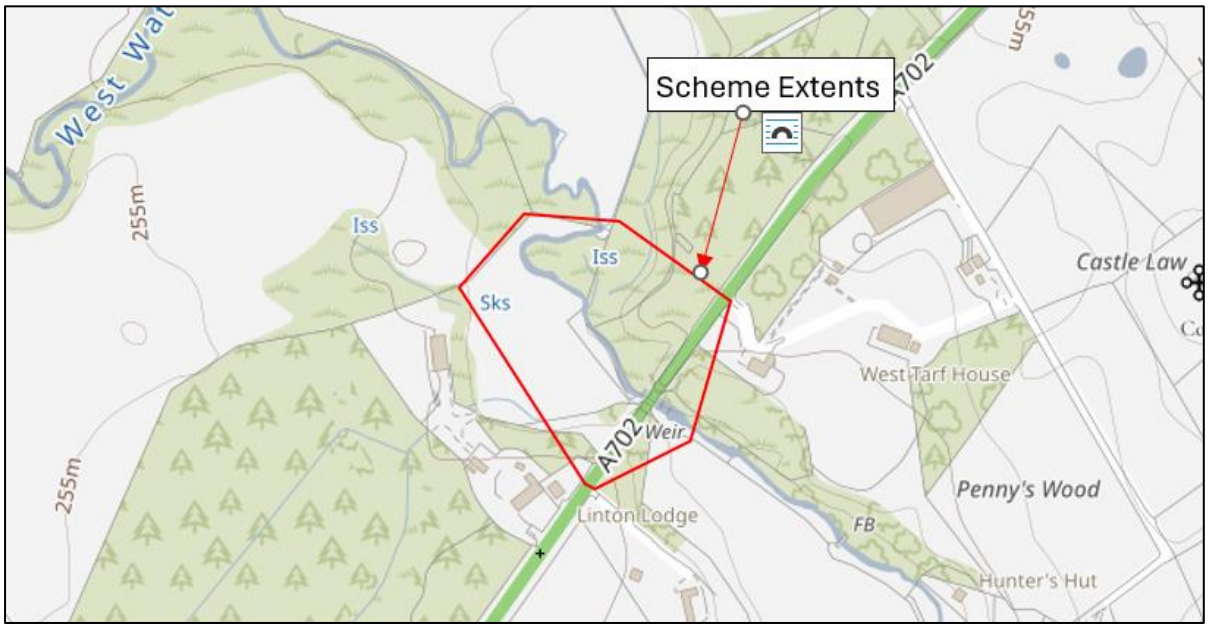

Figure 2. scheme extents including areas including riverbank works. Source: Asset Management Performance System (AMPS). © Europa Technologies Ltd. Contains Ordnance Survey data © Crown copyright and database right 2018.

Description of local environment

Air quality

A search of the Air Quality in Scotland online mapping records that the scheme extents are not located within an Air Quality Management Area (AQMA), and air quality monitoring sites in the wider area record bandings in the 'green zone' (Low Index 1-3).

The scheme lies within the boundary of Scottish Borders Council, which has no Air Quality Management Areas (AQMAs) within its administrative boundary. The nearest AQMA, 'Broxburn,' lies within the West Lothian Council administrative boundary approx. 21km north of the bridge and has been declared for nitrogen dioxide (NO_2) and particulate matter < 10 µm (PM_{10}).

There are five sites registered on the Scottish Pollutant Release Inventory (SPRI) for air pollutant releases within 10km of the scheme.

- Blythbank Farm, West Linton, Peebleshire -Intensive livestock production and aquaculture (4.7km south)
- Whim Poultry Farm, Lamancha, West Linton -Intensive livestock production and aquaculture (7.5km northeast)
- Easter Deans Farm, Leadburn, West Linton, Tweedale -Intensive livestock production and aquaculture (8.2km northeast)
- Cowieslinn Quarry By Eddleston Peeblesshire - Mineral industry (8.9km northeast)
- Millenium Farm, Cowieslinn, Peebles -Intensive livestock production and aquaculture (9.5km northeast)

Baseline air quality at the scheme location is mainly influenced by vehicles travelling along the trunk road. Secondary sources are likely derived from day-to-day agricultural land management activities.

Cultural heritage

The PastMap and Historic Environment Scotland (HES) online mapping tools record no designated cultural heritage sites within 300m of the scheme. Eight undesignated cultural heritage assets (UCHAs) are found within 300m of the scheme. Two of these pertain to the A702 80 Westwater Bridge Canmore site and Historic Environment Record. There is no connectivity between the scheme and the remaining UCHAs, e.g., the nearest lies approx. 90m south of the scheme.

Construction of the A702 road corridor is likely to have removed any archaeological remains that may have been present within the trunk road boundary. The potential

for the presence of unknown archaeological remains in the study area has therefore been assessed to be low.

Landscape and visual effects

The scheme is not situated within a National Park (NP) or National Scenic Area (NSA).

The Landscape Character Type (LCT) in the study area is 'Rolling Farmland - Borders' (no. 99) (Scottish Landscape Character Types). The key characteristics of this LCT are:

- Undulating relief, becoming more pronounced at higher elevations.
- Distinctive areas of flat or constant gentle gradients, giving wide horizons and skyscapes.
- Large-scale strong geometric field pattern, enclosed by hedgerows, with scattered coniferous woods.
- Mix of arable, ley pasture and permanent grazing land.
- Moderately densely settled, with frequent farmsteads and small villages.
- Well kempt, prosperous appearance.

Land use within 300m of the scheme extents is categorised into the following:

- Rectilinear fields and farms, and
- Plantation.

The national scale land capability for agriculture classifies land surrounding the scheme as being:

- 'Class 4.1' - land capable of producing a narrow range of crops, primarily grassland with short arable breaks of forage crops and cereal.

Approx. 0.4ha of broadleaved woodland and approx. 0.3ha of conifer woodland border the A702 to the south of the bridge within the scheme extents. In addition approx. 0.15ha borders the A702 to the north of the bridge within the scheme extents. Outwith this a further 1.5ha of broadleaved woodland and 8ha of mixed mainly conifer woodland is found within the study area.

There are no trees recorded within the Ancient Woodland Inventory Scotland or covered by a Tree Preservation Order (TPO) with connectivity to the scheme extents.

The existing trunk road is a prominent linear landscape feature. The trunk road corridor, for example, has a distinct character shaped by fast-flowing traffic, road markings, safety barriers, signage, landscaping, lighting etc. The scale of the trunk road detracts from the quality and character of the wider landscape.

Biodiversity

The NatureScot Sitelink online mapping tools identifies that the A702 80 Westwater bridge spans West Water, which forms part of the River Tweed Special Area of Conservation (SAC).

The scheme is not situated within 2km of, and does not share connectivity with, any other 'sensitive area' designated for biodiversity features e.g., SAC, Special Protection Area (SPA), Ramsar, Site of Special Scientific Interest (SSSI), etc.

The scheme is not situated with 300m of a Local Nature Conservation Site (LNCS) or Local Nature Reserve (LNR) designated for biodiversity features.

An aquatic ecology survey was undertaken at the scheme location in March 2023.

A search of NBN online mapping tool records the following invasive non-native species within 2km of the scheme extents (within the last 10-years):

- Japanese Knotweed (*Fallopia japonica*)

The nearest record recorded in 2022, approx. 1.3km southeast of the scheme.

A search of the Asset Management Performance System (AMPS) online mapping tool records no INNS, injurious weeds (as listed under the Weeds Act 1959) or invasive native perennials (as listed in the Trunk Road Inventory Manual) within the trunk road boundary scheme extents (in last 10-years).

Habitat immediately bordering the A702 within the scheme extents is comprised of small pockets of mixed and broadleaved woodland to the south and north east of the bridge along with strips of species poor semi-improved grassland. Habitats immediately bordering the bridge span include the West Water river and its adjoining pastoral fields. Roadside vegetation generally offers low ecological habitat value due to its limited scale, fragmented nature and high potential for disturbance owing to cyclic trunk road landscape maintenance, and the proximity of the trunk road (with its fast-flowing traffic). The presence of the trunk road also restricts continuity of, and connectivity between, habitats either side of the trunk road boundary.

Outwith the trunk road boundary, agricultural land surrounding the scheme forms a pattern of open and exposed fields containing predominantly arable land. The result of this intensive agricultural land management is to restrict the occurrence of semi-natural and natural vegetation types. Most field boundaries are post-and -wire

fencing, with vegetative features further delineating field boundaries e.g., shrub hedgerow, rough grassland, ruderal herb stands, scrub and tree shelterbelt. Linear features at field boundaries have wildlife value, both as corridors in an intensively managed landscape, and as habitats for birds and small animals.

Geology and soils

The A702 within the scheme extents is not located within a Geological Conservation Review Site (GCRS), and there are no Local Geodiversity Sites (LGS) with connectivity to the scheme extents.

The National Soil Map of Scotland online mapping tool records the Generalised Soil Type and Major Soil Group in the study area is Brown soils.

The British Geological Survey online mapping tool records that the superficial geology underlying the scheme extents is comprised of:

- Glaciofluvial Deposits (gravel, sand and silt)
- Alluvium (silt, sand and gravel),

The bedrock geology underlying the scheme extents is comprised of:

- Biggar Volcanic Formation (Tuff, rhyolitic).

There is no evidence if historical industrial processes or the storage of hazardous materials that could have given rise to significant land contamination within the scheme extents.

Material assets and waste

The proposed works are required for scour repairs, river training and bridge refurbishment. Materials used will consist of:

- Concrete,
- Steel Rebar,
- Limestone or Masonry Stone,
- Lime Grout,
- Natural stone sizes (200 mm - 800 mm),
- Asphalt,
- Hot Applied Thermoplastic Screed (Road Markings),
- Infill material e.g. Type 1, 6A to 6G, and
- Topsoil.

As the value of the scheme exceeds £350,000 a Site Waste Management Plan (SWMP) is required.

The main waste for these works is likely to consist of planings (European Waste Code 17-03-02), concrete (European Waste Code 17-01-01), steel (European Waste Code 17-04-05) and riverbed substrate.

Noise and vibration

Works are not located within a Candidate Noise Management Area (CNMA) or Candidate Quiet Areas (CQA).

There is no noise modelled data available for the study area (Scotland's Noise Scotland's Environment). However, given the rural nature of the study area and the low AADT flow, it is considered likely that baseline noise levels are low and predominantly influenced by vehicles travelling along the trunk road. Secondary sources are likely derived from day-to-day agricultural land management activities.

Population and human health

Several residential properties, and a farmstead, lie within 300m of the scheme. The closest of which is a residential property located approx. 45m east of the scheme. All properties are screened from the works by a raised roadside embankment and roadside tree shelterbelt.

Equestrian users utilise the banks of West Water, underneath the A702 80 Westwater Bridge, for local passage. In addition, a local footpath borders the northbound carriageway to the north of the bridge within the scheme extents. There are no other non-motorised user (NMU) or community facilities with connectivity to the scheme.

Street lighting is absent throughout the scheme.

The A702, within the scheme extents, is a single carriageway with the national speed limit applying throughout. The Annual Average Daily Traffic (AADT) flow is low (5,133 motor vehicles (ID: 10791, 2022 data)) (Road traffic statistics) and is comprised of:

- 30 two wheeled motor vehicles,
- 3,398 cars and taxis,
- 49 bus and coaches,
- 1,136 Light Goods Vehicles (LGVs), and
- 519 Heavy Goods Vehicles (HGVs).

There are no congestion issues noted on the A702 within the scheme extents during the proposed working hours.

Road drainage and the water environment

A search of the Scottish Environment Protection Agency (SEPA) River Basin Management Plan online mapping tool records that the A702 80 Westwater bridge spans West Water, a classified river (ID: 5320) in the Solway Tweed catchment of the Solway Tweed river basin district. West Water has a main stem approximately 9.7 km in length and has been designated as a heavily modified water body on account of physical alterations that cannot be addressed without a significant impact on water storage for public drinking water and protected habitats and species. West Water has been assigned a Water Framework Directive 2000/60/EC (WFD) overall classification of 'Good', an ecological classification of 'Moderate', and a classification of 'Good' for fish migration.

One small minor unclassified surface waterbody, considered to be a minor tributary or drainage channel. Details are as follows:

- Drain1 – flows into the West Water immediately west of the scheme extents.

Drain1 is too small (in terms of catchment area) to be classified as a main stem waterbody by SEPA under the Water Framework Directive (WFD).

A search of the SEPA's Flood Map online mapping tool records that although the A702 80 Westwater bridge carriageway is not at risk of surface water flooding, the West Water river banks surrounding the bridge have a high risk of fluvial and surface water flooding within the scheme extents (i.e., each year this area has a 10% chance of flooding).

A search of the Scotland's Environment (SE) online mapping tool determined that the trunk road, within the scheme extents, lies on the 'Biggar' and 'Upper Tweeddale Sand and Gravel' groundwaters, which have both been classified as 'Good'.

The scheme is not located within a Nitrate Vulnerable Zone.

Climate

The Climate Change (Scotland) Act 2009 sets out the target and vision set by the Scottish Government for tackling and responding to climate change (The Climate Change (Scotland) Act 2009). The Act includes a target of reducing CO_2 emissions by 80% before 2050 (from the baseline year 1990). The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 amended the Climate Change (Scotland) Act 2009 to bring the target of reaching net-zero emissions in Scotland forward to 2045 (Climate Change (Emissions Reduction Targets) (Scotland) Act 2019).

The Scottish Government has since published its indicative Nationally Determined Contribution (iNDC) to set out how it will reach net-zero emissions by 2045, working

to reduce emissions of all major greenhouse gases by at least 75% by 2030 (Scotland's contribution to the Paris Agreement: indicative Nationally Determined Contribution - gov.scot (www.gov.scot)). By 2040, the Scottish Government is committed to reducing emissions by 90%, with the aim of reaching net-zero by 2045 at the latest.

Transport Scotland is committed to reducing carbon across Scotland's transport network and this commitment is being enacted through the Mission Zero for Transport (Mission Zero for transport | Transport Scotland). Transport is the largest contributor to harmful climate emissions in Scotland. In response to the climate emergency, Transport Scotland are committed to reducing their emissions by 75% by 2030 and to a legally binding target of net-zero by 2045.

Policies and plans

This Record of Determination has been undertaken in accordance with all relevant regulations, guidance, policies and plans, notably including the Environment and Sustainability Discipline of the Design Manual for Roads and Bridges (Design Manual for Roads and Bridges (DMRB)) and Transport Scotland's Environmental Impact Assessment Guidance (Guidance - Environmental Impact Assessments for road projects (transport.gov.scot)).

Description of main environmental impacts and proposed mitigation

Air quality

During the construction phase, activities undertaken on site could potentially have some minor localised and short-term air quality impacts in proximity to the works. The construction phase will, for example, require a range of ancillary plant, vehicles, and non-road mobile machinery (NRMM) which will contribute to local dust and air pollutants. The main sources are likely to be dust generated by cold milling in preparation of carriageway resurfacing, as well as exhaust emissions from ancillary plant and vehicles. As a result, there is potential for local impacts to air quality.

However, considering the nature of the scheme, and with implementation of mitigation detailed below, impacts on local air quality levels during the construction period are assessed to be temporary negligible adverse in magnitude.

Upon completion of the works, no residual air quality impacts are anticipated.

Proposed air quality mitigation measures:

- A water-assisted road sweeper will sweep the carriageway after dust-generating activities to minimise potential effects on the A702 carriageway, waste will be contained and removed from site as soon as is practicable.
- The access road into and out of the site will be monitored, where excessive mud build up occurs the road will be swept.
- Any materials leaving site i.e. soils, road planings etc. will be appropriately covered.
- Any excavated material being temporarily retained on site will be appropriately stored to prevent windblown dust, where appropriate these areas will be dampened down and / or covered.
- Ancillary plant, vehicles and non-road mobile machinery will be regularly maintained, with attention being paid to the integrity of exhaust systems.
- Ancillary plant, vehicles and non-road mobile machinery will be switched off when stationary to prevent exhaust emissions (e.g., there will be no idling vehicles).
- Cutting, grinding, and sawing equipment (if required) will be fitted or used in conjunction with suitable dust suppression techniques e.g., local exhaust ventilation system that fits directly onto tools.

- Regular monitoring (e.g., by engineer or Clerk of Works) will take place when activities likely to result in impacts to local air quality are occurring. In the unlikely event that unacceptable dust, particulate matter or exhaust emissions are emanating from the site, the operation will, where practicable, be modified and re-checked to verify that the corrective action has been effective. Actions to be considered include: (a) minimizing cutting and grinding on-site, (b) reducing the operating hours, (c) changing the method of working, etc.

Cultural Heritage effects

Construction of the A702 road corridor is likely to have removed any archaeological remains that may have been present within the trunk road boundary scheme extents. Additionally, there are no designated cultural heritage sites recorded within 300m of the scheme. As such the potential for the presence of unknown archaeological remains in the study area has been assessed to be low. However, given that earth works are required out with the road corridor there remains some potential limited for previously undiscovered items to be present within the working areas.

Nevertheless, with implementation of mitigation detailed below, the proposed impacts on cultural heritage during the construction period are assessed to be negligible in magnitude. Upon completion of the works, no residual impacts on cultural heritage are anticipated.

Cultural heritage mitigation measures:

- All site personnel will be briefed on the importance of archaeological finds and will be instructed to inform the site supervisor where potential finds are made. If there are any unexpected archaeological finds, all works will temporarily stop, the area will be cordoned off and BEAR Scotland's Environmental Team contacted for advice.

Landscape and visual effects

During construction there will be a short-term impact on the landscape character and visual amenity of the site as a result of the presence of construction plant, vehicles, and traffic management.

However, the scheme is not situated within a 'sensitive area' designated for landscape features e.g., NP, NSA, etc. Furthermore surrounding properties are visually screened from the works location with the A702 also being elevated from the majority of the works and as such views from the road will be somewhat obstructed. As such, the visual impact of the works will be somewhat reduced.

Upon completion of the works, rip rap may be visible from the trunk road, however this is not anticipated to cause a negative impact on the landscape within the area.

Considering the nature of the scheme, and with implementation of mitigation detailed below, impacts on landscape are assessed as temporary negligible adverse in magnitude.

Upon completion of the works, no residual impacts are anticipated e.g., when complete the visual appearance will remain largely unaffected, with bride refurbishment being the only discernible change.

Proposed landscape and visual effects mitigation measures:

- The site will be monitored regularly for signs of litter and other potential contaminants, with any litter being removed after works take place. The site will also be left clean and tidy.
- Upon completion of the works the stripped areas will be appropriately replanted with the use of coir pallets (as per CAR application) grass seed or similar, which will introduce riparian species and reduce the potential for silt run-off post construction.
- During the installation of the site compound, access tracks etc., consideration will be given to reduce visual impacts / damage to the landscape and where possible sited to minimise damage to surrounding soil or vegetation.
- As far as is possible construction vehicles will not be left in places where soil or vegetation can be damaged.
- Upon completion of the works and removal of the site compound measures will be taken to make-good the area, by grass seeding of the site, including access tracks. Where damage has occurred the area will be lightly cultivated or graded to allow natural recolonization by local species and promote integration with existing landscape character.

Biodiversity

The A702 80 Westwater Bridge spans West Water, which forms part of the River Tweed SAC, with works required to be carried out from within the SAC.

As such a Habitats Regulations Appraisal (HRA) screening has been undertaken which could not rule out the potential for Likely Significant Effects (LSE) on the River Tweed's SAC conservation objectives. An Appropriate Assessment (AA) was therefore undertaken to determine the risk of potential impacts on the SAC as a result of the works, and identify any mitigation required to protect the integrity of the site and the qualifying interests. Potential impacts on the SAC as a result of the works highlighted in the HRA are as follows:

- Despite habitat being of poor quality on the right bank of the River Forth, low numbers of fish have been noted and therefore reduction in species density could not be ruled out.
- Fish species could also be disturbed by the placement of rip rap or potential installation of a dry working area.

The AA concluded that there is sufficient information and assessment evidence to conclude that with mitigation in place, the risk of an Adverse Effect on Site Integrity (AESI) of the River Tweed SAC can be excluded. The NatureScot Area Officer for the Scottish Borders has stated in regard to the HRA that they agree there will be LSE on the qualifying interests of the SAC, however the proposal will not adversely affect the integrity of the site given mitigation measures proposed in the following 'Biodiversity' and 'Road drainage and the water environment' sections will be adhered to.

Additional surveys will be undertaken prior to the commencement of works and where necessary species licences will be obtained with additional mitigation adhered to.

During the in-water works there is potential for direct and indirect impacts to aquatic species. However, in-water works will be undertaken over a short period of time (10 weeks), with mitigation measures detailed below being strictly adhered to which will minimise the potential for impacts.

A temporary short-term increase in noise levels may cause disturbance to local wildlife which have been identified along West Water River. The works will, for example, require a range of ancillary plant, vehicles and NRMM which will emit noise and create potential disturbance. The works will also require delivery of materials and the presence of personnel to facilitate the improvements to the carriageway surface. However, the number of construction vehicles and construction operatives required onsite is low given the scale and scope of works. In addition, any species in the area are likely to be accustomed to noise and visual disturbance pertaining to vehicle movements, on the A702 and the scheme will be undertaken utilising a day-time working pattern as far as is possible (negating the requirement for artificial lighting). The potential for significant species disturbance within the area of likely construction disturbance is therefore somewhat diminished and with mitigation measures detailed below being adhered to impacts are expected to be minimal.

Considering the nature of the scheme, and with implementation of mitigation detailed below, the proposed work impacts on biodiversity throughout the construction period are therefore assessed to be temporary minor adverse in magnitude.

Prior to the flood event in 2022 which resulted in the erosion of the riverbed and exposure of the A702 West Water Bridge foundations, a weir was in place immediately downstream of the bridge which prevented the passage of fish

upstream. The design of the scour works and river realignment will ensure that fish passage is restored through the bridge, reconnecting habitats that had previously been inaccessible due to the presence of the weir. Furthermore, the design will result in the re-naturalisation of the riverbed and realignment of the watercourse which will provide bed refugia for fish and wider aquatic habitat for invertebrates.

As such upon completion of the works, moderate beneficial residual impacts are anticipated in relation to biodiversity.

Proposed biodiversity mitigation measures:

- West Water is designated under the River Tweed Special Area of Conservation (SAC) (EU Site Code UK0012691). As such all personnel will be made aware of the sensitivity and protected status of the River Tweed SAC.
- The fisheries board (River Tweed Commission (RTC)) will be appointed to undertake all fish rescue work relating to the scheme. Mitigation will be provided by the RTC and all conditions and mitigation suggested by the RTC will be adhered to on site. Mitigation is expected to consist as a minimum the following measures:
    - All in-stream works, including river realignment, bed reinforcement, green bank reinforcement and grey back reinforcement will not operate during the fish spawning season (1st October – 30th June). Furthermore, all temporary in-stream structures i.e. scaffolding, will be removed from the watercourse prior to the commencement of the fish spawning season.
    - All pumps used during the dewatering will be screened. The screen will prevent fish being drawn into the pumps thus preventing entrapment and mortality.
    - Fish netting and pumps will be regularly inspected to ensure their integrity is maintained.
    - In the event the dry working area is inundated by water e.g. following a flood event, then fish that have potentially moved into the works area will be required to be removed with fish rescue (under licence) prior to recommencing dewatering.
- In the event night works are required, artificial lighting will be sufficiently screened and aligned so as to ensure that there is no direct illumination of neighbouring habitat (e.g., the active areas of West Water, locations adjacent to tree shelterbelt, woodland etc.) to ensure minimal impact on nocturnal species.

- Activities likely to result in impacts to local air quality (e.g., cutting and grinding of materials) will be undertaken downwind (if possible) and at least 10m from West Water, reducing the potential for impacts to local air quality to be released into the river (and by association the River Tweed SAC).
- BEAR Scotland's Environment Team will fulfil the role of an Environmental / Ecology Clerk of Works (ECoW). The ECoW will have the authority to stop work and implement remedial work with immediate effect. The ECoW will visit the site during the mobilisation period to deliver toolbox talks. The ECoW will also periodically visit the site to supervise operations to monitor compliance with this SEMP and other environmental documents / consents (CAR Licence, HRA, etc.).
- The ECoW will also undertake a pre-works check (approx. 14 days before works commence) of the surrounding area. Where additional licencing or mitigation is required these will be obtained and implemented on site.
- Ancillary plant, vehicles, and non-road mobile machinery will be stored (when not in use) at the site compound. If fencing is utilised at the compound (or anywhere else), a gap of 200mm from ground level will be provided, allowing free passage for mammals and preventing entrapment.
- Vegetation clearance will be minimised as far as possible and only undertaken where absolutely necessary to facilitate the works.
- In the event vegetation works are undertaken within the bird nesting season a pre-works bird nesting check will be undertaken by the ECoW no more than 48 hours prior to the commencement of works. Given the potential presence of nesting birds on site, Toolbox Talk TTN-048 Birds will be briefed prior to the commencement of works.
- Site operatives will remain vigilant for the presence of active nests within the vegetation due to be cut back. Where an active nest is identified it will not be removed and a 5 – 10m buffer zone will be set up around the nest until such time that the chicks have fledged. If the event an active nest is identified by site operatives during the works BEAR Scotland's Environmental Team will be contacted for advice.
- Any unsupervised excavations/trenches > 0.5m deep will be covered or have ramps installed when left unsupervised at the end of a working day, to avoid species becoming trapped.

- Site personnel will remain vigilant for the presence of potentially unrecorded instances of invasive non-native flowering plant species (INNS) or injurious weeds within the works area throughout the works period. Should any INNS be identified in working areas, no works will take place within 7m of these areas until the BEAR Scotland Environmental Team can provide further advice on additional mitigation measures.
- All site workers will have received adequate training relevant to their role prior to working on the site, including specific environmental inductions and 'toolbox talks' as required.
- Site personnel will remain vigilant for protected species and will not approach or touch any animals seen on site. Any sightings of protected species will be reported to BEAR Scotland's Environmental Team. Should a protected species be encountered or move within 50m of the active works (including laydown areas), works will be temporarily halted until the animal(s) move at least 50m away from the construction site, or until BEARs Environmental Team can provide advice.
- The Contractor will employ 'soft-start' techniques for all noisy activity to avoid sudden and unexpected disturbance during works. Each time the activity is started up after a period of inactivity, the noise levels will be gradually increased over a period of 30 minutes to permit animals (including birds) to move away from the disturbance.
- All equipment stored onsite will be checked at the start of each workday to ensure mammal species are not present. Any storage containers/plant will also be secured when not in use to prevent exploration by mammal species. Any areas where an animal could become trapped (e.g., storage containers) will also be covered when not in use, to avoid mammals falling in and becoming trapped.
- People, ancillary plant, vehicles, non-road mobile machinery and materials will be restricted to areas of made/engineered ground (as much as is reasonably practicable). If during works unforeseen access to the surrounding environment is required out with that already detailed, works will cease in this area and BEAR Scotland's Environmental Team will be contacted to allow consideration of potential environmental effects.
- BEAR Scotland's Environmental Team will be contacted to allow consideration of potential environmental effects if:
    - unforeseen site clearance is required,
    - there is any deviation from the agreed plan, programme and/or method of working,

    - nesting birds are found onsite.
- BEAR Scotland's Control Room will be contacted if there is a pollution incident.

Geology and soils

Construction activities will require extensive earthworks during the realignment of the watercourse and installation of the concrete slap and embankment protection. As such, there is potential for the works to impact upon the geology and soils through direct and indirect impacts on sensitive sites, loss or sterilisation of mineral deposits or soil resources, disturbance of contaminated land, or surcharging of ground which may accelerate erosion and subsidence.

However, the working corridor is not located within a GCRS, geological SSSI or LGS and material removed from the riverbed will be reused on site as far as possible, as such the potential for impacts is somewhat reduced.

With the implementation of the mitigation detailed below, the potential for impact on geology and soils within the area of likely construction disturbance is somewhat diminished. The proposed works impacts on geology and soils throughout the construction period are therefore assessed to be temporary minor adverse in magnitude.

Upon completion of the works, no residual impacts are anticipated in relation to geology and soils.

Proposed mitigation measures:

- BEAR Scotland will employ a Geomorphological Clerk of Works to inspect key stages of the construction programme to assess compliance with the design and relevant conditions of the CAR Licence.
- Where necessary appropriate mitigation measures i.e. bog mats or similar, will be implemented within access tracks / compounds in the event that ground conditions become too soft to manage the risk of damage.
- If any contaminated land requiring remediation is encountered, it will be contained and/or removed in a safe and controlled manner to the standards required.
- Soil stripping will be minimised as far as possible and undertaken sequentially, where appropriate, so that only the area due to be developed next is stripped, limiting the area of bare exposed soils.
- Excavated soil which will be reused on site will be removed in layers and stored appropriately at least 10m from West Water.

- Silt fencing will be installed around any stockpiled material to prevent run-off. Silt fencing will be regularly inspected and maintained to ensure its integrity.
- Any areas of exposed soil/bare earth/damaged verge as a result of the scour repair works and realignment of the river will be reinstated and re-seeded / coir pallets placed etc. once the works are complete.
- Temporary / permanent fencing will be installed on completion of works to allow the establishment of riverside vegetation.

Material assets and waste

Minimising impacts arising from construction materials are focussed upon making the most efficient use of materials onsite to reduce the need for imported primary materials and minimise the creation and disposal of waste through (i) reduction, (ii) re-use, and (iii) recycling. Potential impacts have been assessed for both the construction and operational phases of this scheme. It is anticipated that most material impacts are likely to arise during construction, though long-term residual impacts could occur post construction during the operational phase e.g., during the disposal of materials arising from routine maintenance operations.

However, the detailed design will reduce the requirements for primary materials e.g., the carriageway surfacing and subbase will be carefully considered to minimise the requirements for importing primary material. Materials will also be derived from recycled, secondary, or re-used origin as far as practicable within the design specifications to reduce natural resource depletion. Specifying TS2010 surface course allows a wider array of aggregate sources to be considered when compared to typical stone mastic asphalt (SMA). As a result, the use of TS2010 should reduce the usage of imported aggregates and increase the use of a wider range of sustainable aggregate sources. The design life for the TS2010 surfacing is also estimated to be 20 years. The enhanced durability of TS2010 therefore reduces reoccurring routine maintenance and associated levels of traffic disruption to this section of road over the period.

A SWMP template, will be partially completed be the Design Engineer and then will be issued to the Contractor to complete the contract delivery section. The SWMP will provide details of the following:

- The quantity and type of waste that will be produced,
- How waste will be minimised, reused, recycled, recovered, or otherwise diverted from landfill,
- How materials that cannot be reused, recycled, or recovered will be removed from site and consigned, transported and disposed of in full accordance with all relevant UK legislation.

Considering the nature of the scheme, and with implementation of the mitigation detailed below, the proposed works impacts on material assets and waste throughout the construction period are therefore assessed to be temporary negligible adverse in magnitude.

Upon completion of the works, no residual impacts are anticipated for materials assets or waste.

Proposed material and waste mitigation measures:

- A Site Waste Management Plan (SWMP) will be completed by the Designer and Contractor as required.
- Good materials management methods (e.g., 'just-in-time' delivery) will be implemented wherever possible.
- If any soil is required to be removed from site, waste classification testing will be undertaken and confirmation of acceptance by the waste receiver obtained prior to the movement of soil.
- Care will be taken to order the correct quantity of materials to prevent the disposal of any excess.
- The Contractor will comply with all 'Duty of Care' requirements, ensuring that all surplus materials and waste are stored, transported, treated, used, and disposed of safely without endangering human health or harming the environment. Material transfer notes and/or waste exemption certificates (if required) will also be completed and retained.
- Any materials being removed from site will have the appropriate waste licencing / exemptions.
- Designated areas will be identified, within which all materials should be stored to limit environmental disturbance during construction works. This will include a designated area (if required) for segregation and reuse of waste materials.
- The selection of areas for materials stockpiling will be at least 10m from West Water and avoid sensitive locations such as road drainage. Stockpiled materials with leachate potential, for example, will be stored away from road drainage to prevent cross-contamination with other materials, wastes, or groundwater.
- Materials will be stored with the appropriate security to prevent loss, theft, or vandalism.
- All temporary road signs and traffic cones will be removed from site on completion of works.
- Wastewater from welfare facilities will be subject to effluent treatment followed by tanker removal.

- If hazardous substances are used onsite, each substance will be subject to assessment under the Control of Substances Hazardous to Health (COSHH) Regulations 2002. Hazardous substances will also be clearly labelled and disposed of, in line with their relevant waste regulations. Special waste will also not be mixed with general waste and/or other recyclables.

Noise and vibration

Activities undertaken on site could potentially have some localised and short-term noise impacts in proximity to the works. The works will, for example, require a range of ancillary plant, vehicles and NRMM. Noise will also be generated by use of hammers, unloading of materials, etc. As a result, there is potential for noise and vibration effects.

However, the works are not located within a CNMA or CQA. Works will also be completed utilising a daytime working pattern as far as possible and will be undertaken partially from beneath road level. Works with the potential to produce high levels of noise and vibration (hammers, unloading of materials, etc.) will also be intermittent, temporary, and short-lived. Therefore, the potential for disturbance will therefore be somewhat diminished.

With the implementation of the mitigation detailed below, it is unlikely that noise and vibration associated with the works will lead to significant impacts, disruption and/or complaints. The proposed scheme is therefore anticipated to result in temporary minor adverse noise impacts.

Upon completion of the works, no residual noise and vibration impacts are anticipated.

Proposed noise mitigation measures:

- The local authority environmental health will be notified of night-time working (if required) by BEAR Scotland's design engineer.
- Wherever possible, careful consideration will be given to the siting and orientation of particularly noisy items of non-road mobile machinery so that it is located away from surrounding properties.
- Where possible, the noisiest work operations (e.g., excavation of river bed material, breaking out of road surfacing, unloading materials etc.) will be completed before 23:00.
- If unacceptable noise is emanating from the site the operation will, where possible, be modified and re-checked to verify that the corrective action has been effective. Actions to be considered include (a) minimizing cutting and grinding on-site, (b) reducing the operating hours, (c) repositioning equipment, (d) changing the method of working etc.

Corrective actions will be actioned through the non-conformance reporting procedure, which ensures a root-cause analysis is carried out on each incident. The non-conformance procedure also ensures that appropriate corrective and preventative action measures are agreed and implemented in a timely fashion with all parties, and are recorded and actioned through to closeout, and fully auditable and traceable.

- Ancillary plant, vehicles and non-road mobile machinery with directional noise characteristic will (where practical) be shut down in intervening periods between site operations.
- The use of paving breakers (jackhammers), chipping hammers, etc. will be avoided (except where there is an overriding justification), and if used will be fitted with mufflers or silencers of the type recommended by the manufacturer.
- Drop heights from vehicles and non-road mobile machinery will be kept to a minimum to minimise noise when unloading.
- All ancillary plant, vehicles and non-road mobile machinery used onsite will have been regularly maintained, paying attention to the integrity of silencers and acoustic enclosures.
- All compressors will be ‘sound-reduced’ models fitted with properly lined and sealed acoustic covers which will be kept closed when in use.
- HGV, site vehicles and non-road mobile machinery will be switched to the minimum setting required by HSE and, where possible, will utilise ‘broadband non-tonal’ or ‘directional sound reversing’ alarms. Speed limits will also be reduced through the works.

Population and human health

During construction, activities undertaken on site have the potential to have temporary adverse impacts on local residents and road users. However, there is no requirement for a Compulsory Purchase Order (CPO). While residential properties are located, at their closest, 45m from the works, they are offered some visual screening due to the presence of surrounding vegetation and raised roadside embankments, furthermore the majority of works will be undertaken during daytime working hours and as such impacts to local residents may be somewhat reduced.

While the works are expected to be on site for a duration of six months, traffic flows along this route are low and no congestion issues are expected, therefore impacts to road users are expected to be minimal.

Considering the nature, duration, size and scale of the scheme, and with implementation of the mitigation described below, impacts on population and human health are assessed as temporary minor adverse in magnitude.

Upon completion of the works, no residual impacts are anticipated in relation to population and human health:

Proposed population and human health mitigation measures:

- Advanced signage will be strategically placed on the trunk road to notify stakeholders of the road closure and diversion. Signage will be installed at least 7 days in advance of the road closure.
- Where appropriate, a communication strategy (e.g., social media, consultation with local authority and other stakeholders, letter drop etc.) will be initiated to keep local residents and/or businesses informed of the proposed working schedule, particularly the times and durations of noisy construction activities. The communication strategy will also provide a 24-hour contact number for the BEAR Scotland Control Room.
- Given the proximity to residential properties from the scheme extents, Toolbox Talk TTN-042 Being a Good Neighbour will be briefed prior to works commencing.
- Equestrian users utilise the banks of West Water, underneath the A702 80 Westwater bridge, for local passage. Advanced signage will be put in place to notify equestrian users if the route is to be temporarily blocked during construction.
- A local footpath borders the northbound carriageway to the north of the bridge within the scheme extents. Traffic management arrangements will include appropriate accommodations for non-motorised road users, if necessary.
- A Traffic Management Plan (TMP), which includes measures to avoid or reduce disruption to road traffic, will be produced in accordance with the Traffic Signs Manual (Department of Transport 2009). The TMP will ensure that there is no severance of community assets, access routes or residential development.

Road drainage and the water environment

During construction works, there is potential for temporary adverse impacts on the water environment. Potential changes in water quality e.g., from pollution events (either by accidental spillage of sediments, particulate matter, chemicals, fuels or by mobilisation of these in surface water caused by rain) during works have the potential to have a direct or indirect effect on the West Water and by association the River Tweed SAC.

The in-water works required fall under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR). A CAR Simple Licence (CAR/S/5004547) has therefore been issued by the Scottish Environment Protection

Agency (SEPA) for works to proceed. All mitigation measures detailed within this document will be adhered to and are included below.

Ancillary plant, vehicles and NRMM will also be stored in the compound and the accidental release of pollutants is also extremely unlikely. Pollution prevention measures, for example, will also be enforced onsite SEPA's Guidance for Pollution Prevention (GGP) will be strictly adhered to, reducing the likelihood of a loss of containment occurring.

Considering the nature of the scheme, and with implementation of the mitigation detailed below, the proposed works impacts on the road drainage and water environment are assessed as temporary negligible adverse in magnitude.

The design of the river alignment largely follows the existing (pre-flood event) channel with the sharpness of some of the existing bends being softened which is expected to help reduce the risk of bank erosion. Furthermore, the river bed restoration will incorporate appropriately positioned pools and glides which will enable morphological diversity through variation in the flow pattern which will have beneficial impacts on morphological processes and features, resulting in a more natural character representative of the rest of the watercourse.

As such upon completion of the works, moderate beneficial residual impacts are anticipated in relation to the water environment.

Proposed road drainage and water environment mitigation measures:

- The works fall under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR), therefore the Scottish Environment Protection Agency (SEPA) have issued a CAR Simple Licence (CAR/S/5006804). A copy of the CAR licence, and its associated application documents, will be kept on site at all times for inspection. In addition, all conditions of the licence will be followed, these include but are not limited to:
    - The works will not alter the existing bank height (unless where the consented design permits this).
    - The works will not alter the existing bed width (unless where the consented design permits this).
    - Any works in the wetted part of the channel, will not be undertaken during the period in which fish are likely to be spawning in the watercourse nor in the period between such spawning and the subsequent emergence of juvenile fish.
- Appropriate silt mitigation will be implemented to prevent silt pollution of the watercourse during works.

- An oil boom will be placed downstream of the dry working area and maintained and regularly inspected throughout the works.
- Over pumped water will be discharged in an appropriate manner that does not result in excess sediment to be generated into the flow of West Water.
- All in-water activities will be undertaken in such a manner that do not introduce excess sediment into the watercourse. This will include, but not be limited to:
    - Rip-rap will be appropriately cleaned and dried prior to being installed.
    - Rip-rap will be installed in such a way that reduces drop heights and limits any ‘kick-up’ of sediment.
    - Each in-water activity will have appropriate activity specific silt mitigation installed.
    - Vehicle movements in the watercourse will be minimised.
    - When vehicle movements are required in the watercourse, an oil boom will be installed across the watercourse.
- Compliance with the rules of General Binding Rules (GBR) 9 and 13 will be followed. In particular the following will be noted:
    - Refuelling will take place at least 10m from West Water.
    - Any static plant or equipment used within 10m of West Water will be positioned on a suitable drip tray with capacity for 110% of the fuel tank supplying the static plant of equipment.
    - Machinery used near West Water will be appropriately maintained to avoid oil leaks.
    - Washing of any machinery will take place at least 10m from West Water and the washings will not be allowed to enter West Water.
    - Any damage caused to the bed and banks of a surface water from the operation of machinery will be repaired, including re-establishing vegetation on any areas of bare earth on the banks, either by covering the area with grass turfs or lining with a biodegradable geotextile and seeding.
    - Vegetation will only be permitted to be removed from the banks if the works cannot otherwise be reasonably carried out.

  - Vegetation that is removed will not be disposed of into the channel.
  - The removed sediment and other matter will not be placed on the bank of the watercourse.

- Concrete, cement, grout, etc. mixing and washing areas will be sited 10m from West Water and road drainage entry points. The washing out and cleaning of concrete batching plant will be undertaken within a contained area, and wash waters will be collected and contained for authorised disposal off site. Wash waters from concrete works will not be discharged into West Water.
- Where there is a requirement for a concrete pump to be sited closer than 10m from West Water i.e. during scour repairs. It will only be permitted once West Water has been fully dewatered. The concrete pump will be sited within a hardstanding area to ensure that no spills leach into the surrounding ground.
- Any loose material or bagged cement/concrete (if required) will be stockpiled in an area of the site where it can be left undisturbed and will not interfere with site operations and be at least 10m from West Water. Bagged cement/concrete will also be protected to ensure it remains dry. The surface of stockpiles will also be graded to reduce surface runoff and will be located at least 10m from road drainage and stored on an impermeable surface or have bunds erected around stockpiles.
- In-stream works, soil stripping and excavation works will not take place during high flows or periods of heavy rainfall. Dry weather and low flow conditions are pre-requisites for the safe installation and management of sediment mitigation measures. The creation of a dry-working-area is easier to manage during low flows. The Contractor will therefore monitor the weather forecast and flows/water levels throughout the works, and during periods of extreme weather or high flow events the works will be temporarily postponed. The Contractor will also have a contingency plan in place if damage to the dry-working-area occurs.
- Prior to constructing the temporary dry working area, the following will be noted:
  - The temporary dry working area will be designed by a competent person, taking into account:
    - the reduction in channel capacity (for flood risk);
    - the potential increase in flow velocity (for adjacent bed and bank erosion and toe scour);

        - changes in flow patterns (for adjacent bed and bank erosion and toe scour);
        - fluctuations in water level;
        - channel substrate (to avoid installation problems);
        - alignment of the dry working area, particularly at the upstream and downstream ends where bank erosion can be induced.
    - Fish rescue will be undertaken prior to the area being dewatered.
    - When the works are complete, but before the barriers are removed, all materials, debris, tools, plant and equipment will be removed from the dry working area. The area will be checked thoroughly for spillages or potential pollution sources and any pollution issues remediated immediately.
    - Prior to rewatering the area the upstream and downstream barriers will be removed of any silt / trash which has built up.
    - The works area will be partially re-watered before removing the dam to avoid sudden ingress of water causing erosion of the replaced bed or bank material. When re-watering, the pump inlets will be screened to prevent intake of fish or other aquatic animals (if required).
    - The downstream barrier will be removed first following the Non-native Species Secretariat 'Check, Clean, Dry' procedure as far as is reasonably possible to ensure the dam material is free of invasive species.
    - The upstream barrier will then be removed following the same procedure.
    - A competent person will be made responsible for monitoring the temporary dam at regular time intervals. This will include: (i) water levels (upstream, downstream), (ii) bank and bed erosion at the upstream and downstream ends, (iii) channel stability, and (iv) debris accumulation.
- All site personnel will be fully briefed in silt management procedures and briefed on their responsibilities. This will be achieved through delivery Toolbox Talk TTN-012 Water Pollution – Silt prior to works commencing onsite.
- The abstraction or transfers of water from, discharges to, or the washing of tools in surface waterbodies is not permitted.

- An edge protection system will be utilised to prevent material, ancillary plant, debris, sediment, etc., escaping beyond the bridge parapets over the A702 80 Westwater Bridge during bridge deck works. Sandbags will be located at the bottom of the containment systems and debris netting will cover the edge protection system.
- The Contractor will implement measures to minimise the risk of sediment or accidental spillages entering the road drainage system e.g., prior to works commencing any roadside gullies within 10m of work activities will be bunded (e.g., utilisation of drain covers or similar) to ensure full segregation of the works from the road drainage system. The Contractor will inspect bunds periodically to ensure that they have not been removed, damaged, or interfered with and they will be cleaned of silt and debris, as necessary. If it is identified that bunds are not up to standard, the works will not commence until they have been reinstated to the condition, they were originally in.
- The Contractor will have suitable plans in place to deal with the potential for flood / pollution events.
- Any incidents that occur on site i.e. spills, pollution events etc. will be reported appropriately.
- All waste, vehicles, ancillary plant, non-road mobile machinery and fuels will be stored in the compound(s) or laydown area and will be secured and located, if space is available, at least 10m from drainage entry points, West Water and Drain1, in order to comply with GPP 5 ‘works and maintenance in or near water’. Refuelling will only be undertaken at designated refuelling areas (e.g., on hardstanding, with spill kits available, and >10m from drainage entry points, West Water and Drain1, where practicable). Spill kits will also be available within all site vehicles and spill kits will be replenished onsite when required. Only designated trained and competent operatives will be authorised to refuel plant. Generators, and other ancillary plant and non-road mobile machinery, where there is a risk of leakage of oil or fuel, will have internal bunding or will have a secondary containment system placed beneath them that meets 110% capacity requirements. Containment systems will also be emptied regularly. All waste, vehicles, ancillary plant, non-road mobile machinery and fuels will also be stored in a manner that ensures they are protected from damage by collision or extremes of weather.
- Regular visual pollution inspections of the designated laydown area and work site (particularly near road drainage entry points, West Water and Drain1) will be conducted (e.g., site walkover by engineer or Site Supervisor), especially during periods of heavy rain.

- All vehicles and non-road mobile machinery used onsite will have been regularly maintained, paying attention to the integrity of oil tanks, coolant systems, gaskets etc. A checklist will be present to make sure that the checks have been carried out.

Climate

BEAR Scotland, working on behalf of Transport Scotland, undertake carbon monitoring of major projects and operational activities. Emissions from activities are recorded using Transport Scotland's Carbon Management System. BEAR Scotland also undertakes resource efficiency activities to manage and reduce emissions contributing to climate change. The carriageway resurfacing works will also extend the maintenance intervals required for future works. In doing so, the service life of the trunk road is also extended.

During works there is potential for impacts as a result of the emission of greenhouse gases through the use of equipment, vehicles, and NRMM, material use and production, and transportation of material/waste. However, considering the nature, duration, size and scale of the scheme, and the mitigation detailed below, the risk of significant impacts to climate are considered to be negligible adverse in magnitude.

Upon completion of the proposed scheme no residual impacts are anticipated on the climate.

Proposed climate mitigation measures:

- Local contractors and suppliers will be used as far as practicable to reduce fuel use and greenhouse gas emitted as part of the works.
- BEAR Scotland will adhere to its Carbon Management Policy.
- Where possible, waste will be disposed of at local waste management facilities.

Vulnerability of the project to Major Accidents and Disasters

Works are taking place in summer, with site facilitation occurring in June and in water works commencing in July, when historically the West Water flow levels are low, therefore the risk of flooding during the scheme is minimised.

The works compound will be located in the northwest field, and access to the site will be gained via a temporary road created during the emergency works. Landowner permission has been obtained to allow temporary access to the site and works compound throughout the works duration. TM will employ two-way traffic lights with

occasional full road closures for delivering materials, changing the TM etc. Equestrian users and pedestrians will appropriately accommodated within the TM. As such, the proposed works impacts on road traffic accidents is assessed to be of negligible magnitude.

A Site Environmental Management Plan (SEMP) will be produced by BEAR Scotland which sets out a framework to reduce the risk of adverse impacts from construction activities on sensitive environmental receptors. The Contractor will comply with all conditions of the SEMP during works and may be subject to audit throughout the contract.

Considering the above, the vulnerability of the project to risks of major accidents and disasters is considered to be low.

Assessment of cumulative effects

The proposed works are not anticipated to result in significant environmental effects. Due to the nature of the proposed works, no cumulative effects are anticipated with any other developments in the vicinity. Any future BEAR Scotland schemes will be programmed to take into account already-programmed works and as such, any cumulative effect will be limited.

In addition, a search using Scottish Borders Council 'Simple Search' identified that there are no planning applications within 300 m of the scheme.

A search of the Scottish Road Works Commissioner's website (map search) has identified that no other road works are currently ongoing, or noted as being planned, on the A702 trunk road or surrounding roads in proximity to the scheme which will be undertaken at the same time.

Considering the nature and scale of the works being undertaken by BEAR Scotland, no in-combination effects are anticipated.

Assessments of the environmental effects

The A702 80 Westwater scheme is located within the River Tweed SAC and as such, a HRA has been undertaken that has shown that there is sufficient information and assessment evidence to conclude that the proposed scheme, with the implementation of mitigation and control measures, will not result in any AESI. Consultation with NatureScot and Transport Scotland on the outcome of the AA also confirmed no AESI given mitigation and control measures outlined above.

As detailed in the Description of Main Environmental Impacts and Proposed Mitigation section, there are no significant effects anticipated on any environmental receptors as a result of the proposed works.

Statement of case in support of a Determination that a statutory EIA is not required

This is a relevant project in terms of section 55A(16) of the Roads (Scotland) Act 1984 as it is a project for the improvement of a road and the works (together with any area occupied by apparatus, equipment, machinery, materials, plant, spoil heaps, or other such facilities or stores required during the period of construction) are situated in the River Tweed SAC, which is a sensitive area within the meaning of regulation 2(1) of the Environmental Impact Assessment (Scotland) Regulations 1999.

The project has been subject to screening using the Annex III criteria to determine whether a formal Environmental Impact Assessment (EIA) is required under the Roads (Scotland) Act 1984 (as amended by The Roads (Scotland) Act 1984 (Environmental Impact Assessment) Regulations 2017). Screening using Annex III criteria, reference to consultations undertaken, and review of available information has not identified the need for a statutory EIA.

The project will not have significant effects on the environment by virtue of factors such as:

Characteristics of the scheme:

- Works are restricted to like-for-like bridge refurbishment and restoration / realignment of the West Water River and surrounding embankments.
- The works will improve safety on the bridge and protect against future deterioration of the structure and flood events. Consequently, carrying out these works now will reduce the need for major works at a future date. This in turn will minimize the extent of work required on the A702 80 Westwater bridge. In doing so, the service life of the structure is also extended.
- All ‘in-water’ works will be restricted to out with the spawning season (1st October – 30th June).
- Works are not expected to result in significant disturbance to protected species that may be present in the wider area.
- Any potential impacts of the works are expected to be temporary, short-term, not significant, and limited to the construction phase.
- No in-combination effects have been identified.
- The risk of major accidents or disasters is considered to be low.

Location of the scheme:

- The ‘in-water’ works are located within the River Tweed SAC, however a HRA has been undertaken which has confirmed that the works will not result in AESI on the qualifying features of the SAC.
- The scheme does not lie within any sites of historical, cultural, or archaeological significance.
- The scheme is not located within any areas designated for landscape interests.
- Land use will not change as a result of the works.
- The works do not require any private land acquisition.
- The scheme does not lie within any sites designated for geology or soils.
- The scheme is not located within a densely populated area.

Characteristics of potential impacts of the scheme:

- The waste hierarchy will be followed to reduce waste to landfill.
- The dry-working area will reduce the likelihood of significant quantities of dust, earth, particulate matter etc. from entering the River Tweed SAC.
- With good practice pollution prevention measures implemented onsite, there is a negligible risk of a pollution event e.g., compliance with the CAR Licence (CAR/S/5006804) and SEMP.
- As the works are restricted to the like-for-like bridge refurbishment, river realignment and riverbank restoration, there is no change to the vulnerability of the road to the risk or severity of major accidents/disasters that would impact on the environment.
- No adverse impacts on the environment are expected during the operational phase as a result of the works. The works are expected to result in beneficial impacts on biodiversity and the water environment.

References of supporting documentation

- A702 West Water Bridge Scour Protection Habitats Regulations Appraisal, December 2023 (Produced by Jacobs for BEAR Scotland)
- Engineering Permit A702 Westwater Bridge CAR/S/5006804

Annex A

"sensitive area" means any of the following:

- land notified under sections 3(1) or 5(1) (sites of special scientific interest) of the Nature Conservation (Scotland) Act 2004
- land in respect of which an order has been made under section 23 (nature conservation orders) of the Nature Conservation (Scotland) Act 2004
- a European site within the meaning of regulation 10 of the Conservation (Natural Habitats, &c.) Regulations 1994
- a property appearing in the World Heritage List kept under article 11(2) of the 1972 UNESCO Convention for the Protection of the World Cultural and Natural Heritage
- a scheduled monument within the meaning of the Ancient Monuments and Archaeological Areas Act 1979
- a National Scenic Area as designated by a direction made by the Scottish Ministers under section 263A of the Town and Country Planning (Scotland) Act 1997
- an area designated as a National Park by a designation order made by the Scottish Ministers under section 6(1) of the National Parks (Scotland) Act 2000.

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