



**TRANSPORT
SCOTLAND**
CÒMHDHAIL ALBA

Environmental Impact Assessment Record of Determination

A68 100 Townfoot

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Project Details

Description

BEAR Scotland has been commissioned by Transport Scotland to carry out expansion joint replacement at the A68 100 Townfoot bridge. The works will consist of like-for-like expansion joint replacement on both sides of the bridge.

Construction activities are as follows:

- Set up traffic management (TM) and mark out site
- Excavate and replace expansion joints
- Resurface road surrounding joints
- Remove TM and open road

The works are currently programmed to be completed within the 2022/2023 financial year. Works are expected to be completed over five nights. Traffic management (TM) is currently anticipated to consist of overnight lane closures and full road closures. However, if the programme changes, this may result in amendments to the exact TM requirements. Where required, alternative pedestrian routes will be included in the TM setup.

Location

The scheme is located within the Scottish Borders Council region, within the town of Jedburgh (Figure 1).

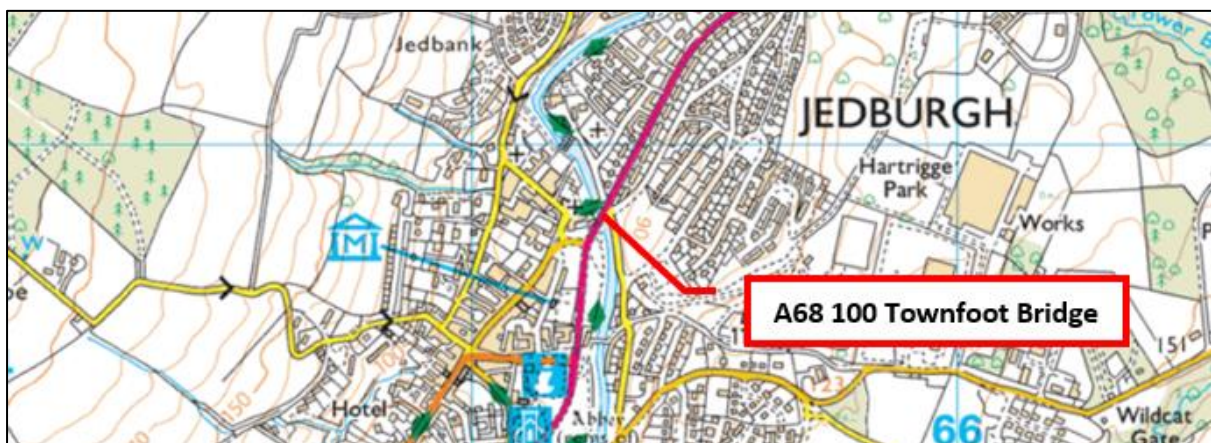


Figure 1. Location of A68 100 Townfoot Bridge Source: Grid Reference Finder. Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown Copyright and database right 2022.

Description of local environment

Air quality

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, 'High Street Musselburgh' lies within the East Lothian Council administrative boundary approx. 60 km north of the scheme and has been declared for nitrogen dioxide (NO₂).

There are no sites registered on the Scottish Pollutant Release Inventory (SPRI) ([Scotland's Environment](#)) for air pollutant releases within 1km of the scheme.

Baseline air quality at the scheme location is mainly influenced by vehicles travelling along the A68 trunk road. Secondary sources are likely derived from vehicles travelling along the local road network and day-to-day urban activities within Jedburgh.

Cultural heritage

The [PastMap](#) and [Historic Environment Scotland](#) (HES) online mapping tools records sixty listed buildings and one scheduled monument within 300 m of the A68 100 Townfoot bridge. Only two of the listed buildings lie within proximity to the scheme extents (i.e., within 50 m). The remaining listed buildings and scheduled monument lie > 50 m from the scheme extents.

The scheme also lies within the 'Jedburgh' Conservation Area ([PastMap](#)).

Of lesser cultural heritage value, two-hundred and seven undesignated cultural heritage assets (UCHAs) lie within 300 m of the scheme, one of which pertains to the scheme extents. There is no connectivity between the scheme and the remaining UCHAs e.g., the nearest lies outwith the trunk road boundary, approx. 20 m north of the scheme ([PastMap](#)).

Landscape and visual effects

The scheme is not situated within a 'sensitive area' designated for landscape features e.g., [National Park](#) (NP), [National Scenic Area](#) (NSA).

The Landscape Character Type (LCT) within the study area is Wooded Upland Fringe Valley (no. 119) ([Scottish Landscape Character Types](#)). The Wooded Upland Fringe Valley LCT is characterised by deeply incised and well-wooded river valleys.

Land use within 2 km of the scheme extents is categorised into the following: (i) medieval town, (ii) urban area, (iii) industrial or commercial area, (iv) designed landscape, (v) recreation area, (vi) rectilinear fields and farms, (vii) plantation, (viii) rough grazing, (ix) golf course, (x) managed woodland, and (xi) cemetery.

The scheme lies within Jedburgh, with urban development surrounding the A68 100 Townfoot bridge. Views from the scheme extents are of urban development (primarily homogenous housing stock), transport infrastructure and the riparian habitat following the course of Jed Water / Raven Burn (Kaim Burn confluence to Teviot Water).

The [national scale land capability for agriculture](#) classifies land surrounding the scheme as being 'Class 3.2' – land capable of producing consistently high yields of a narrow range of crops and / or moderate yields of a wider range (short grass leys are common).

There are no areas of ancient woodland registered on the [Ancient Woodland Inventory Scotland](#) with connectivity to the scheme extents. Approx 1.5 ha of native deciduous woodland (as registered on the [Native Woodland Survey of Scotland](#)) lies 40 m north of the scheme.

Biodiversity

The [NatureScot Sitelink](#) online mapping tools identifies that the scheme spans the River Tweed Special Area of Conservation (SAC) (EU Site Code UK0012691). A high-level Habitats Regulations Appraisal (HRA) screening was undertaken to determine the risk of potential impacts on the SAC as a result of the works.

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

The [National Biodiversity Network](#) (NBN) online mapping tool records no protected species within 0.3 km of the scheme during the past ten years.

A Preliminary Ecological Appraisal (PEA), undertaken on the 2nd of September 2022, did not note any evidence of any other mammal species of conservation importance within the area of likely construction disturbance (including permanent habitat, resting places etc.).

The NBN and Asset Management Performance System (AMPS) records no invasive non-native species (INNS), injurious weeds (as listed under the Weeds Act 1959), or invasive native perennials (as listed in the Trunk Road Inventory Manual) within the scheme extents (within last 10-years). A PEA (undertaken on 2nd September 2022) confirmed that there are no INNS, injurious weeds or invasive native perennials within the trunk road boundary scheme extents.

The scheme extents are covered by a Tree Preservation Order (TPO).

Geology and soils

The scheme 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 Types in the study area are Mideral Podzols and Alluvial Soils, and Major Soil Groups in the study area are Podzols and Alluvial Soils.

The [British Geological Survey](#) online mapping tool records that the superficial geology underlying the scheme extents is comprised of Alluvium (silt, sand and gravel). The bedrock geology underlying the scheme extents is comprised of Stratheden Group and Inverclyde Group (sandstone and argillaceous rocks, interbedded).

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

Material assets and waste

The proposed works are required to replace the worn expansion joints. Materials used will consist of:

- EIMR seal
- Bitflex resin mortar
- Carrier rail
- Sinusoidal anchorage
- Anti-skid layer
- Rapid curing concrete

The scheme is executed by the operating company as site operations e.g. 'As-of-Right' scheme of value less than £350,000. As a result, a Site Waste Management Plan (SWMP) is not required.

Noise and vibration

Works are not located within a [Candidate Noise Management Area](#) (CNMA) and there are no [Candidate Quiet Areas](#) (CQA) on the major road networks mapped during END Round 3.

The night-time modelled noise level (L_{night}), within the scheme extents, ranges between 55 and 65 decibels, with levels dropping to between 50 and 55 decibels at

the nearest Noise Sensitive Receptor (NSR) (residential property) ([Scotland's Noise Map](#)).

Baseline noise levels at the scheme location are mainly influenced by vehicles travelling along the A68 trunk road. Secondary sources are likely derived from vehicles travelling along the local road network and day-to-day urban activities within Jedburgh.

Population and human health

The scheme lies within Jedburgh, with urban development surrounding the A68 100 Townfoot bridge. Approx. three hundred and seventy properties (including business premises, churches, community facilities, health centres and a fire station) lie within 300 m of the scheme. Properties nearest to the scheme (e.g., within 100 m) have no screening from the scheme extents. Properties further afield are screened by intervening properties.

One Core Path ([Scotland's Environment](#)) crosses beneath the A68 100 Townfoot bridge, adjacent to the south abutment. As all works are restricted to the bridge deck there is no connectivity between the scheme and the Core Path. Local footpaths are present either side of the bridge deck. Street lighting is present on the A68 either side of the A68 100 Townfoot bridge.

The A68 at the scheme location is a single carriageway with a 30-mph speed limit applying throughout. The Annual Average Daily Traffic (AADT) flow is 5,201 (ID: 40733) (2020 data) and is comprised of:

- 89 two wheeled motor vehicles,
- 3,881 cars and taxis,
- 58 bus and coaches,
- 838 Light Goods Vehicles (LGVs), and
- 335 Heavy Goods Vehicles (HGVs).

The AADT flow recorded for pedal cycles is 23 (2020 data).

There are no congestion issues noted on the A68 within the scheme extents during the proposed working hours.

Road drainage and the water environment

The Scottish Environment Protection Agency (SEPA) [River Basin Management Plan](#) online mapping tool records Jed Water/Raven Burn (Kaim Burn confluence to Teviot Water), a classified surface waterbody (ID: 5231), is spanned by the A68 100 Townfoot bridge. Jed Water/Raven Burn (Kaim Burn confluence to Teviot Water) is a river in the River Tweed catchment of the Scotland river basin district and has a main stem approx. 15.4 km in length. Jed Water/Raven Burn (Kaim Burn confluence to

Teviot Water) has been assigned a Water Framework Directive 2000/60/EC (WFD) overall classification of 'Good', overall ecological classification of 'Moderate', and a classification of 'High' for fish migration ([SEPA](#)).

There are no unclassified surface waterbodies spanned by, culverted beneath or which share direct connectivity with the scheme extents.

A search of the Scotland's Environment (SE) online mapping tool determined that the scheme lies on the 'Teviotdale Sand and Gravel' and 'Jedburgh' [groundwater](#) bodies, which have both been classified as 'Good'. These groundwater bodies are also classified as [Drinking Water Protected Areas](#).

The scheme is not located within a [Nitrate Vulnerable Zone](#).

The SEPA indicative surface water online [flood mapping](#) tool records that the A68 100 Townfoot bridge is not at risk of surface water flooding.

Road drainage is provided by roadside gullies on the A68 either side of the A68 100 Townfoot bridge.

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 CO2 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 breakout of defective joints, as well as exhaust emissions from ancillary plant and vehicles. As a result, there is potential for dust, particulate matter, and exhaust emissions (DPMEE) to be emitted to the atmosphere.

However, DPMEE associated with the construction phase will be localised to the works footprint and of a short duration. Moreover, considering the nature, size, and scale of the scheme, and with implementation of mitigation detailed below, the proposed works 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:

- Careful consideration will be given to the siting and orientation of ancillary plant, vehicles, and NRMM, so that it is located, as far as is possible, away from receptors (if possible, > 20 m from surrounding properties). Activities which have the potential to produce dust, particular matter, and exhaust emissions (DPMEE) (e.g., cutting and grinding of materials) will, if possible, also be undertaken away from any surrounding properties.
- Ancillary plant, vehicles and NRMM will have been regularly maintained, paying attention to the integrity of exhaust systems.
- Ancillary plant, vehicles and NRMM will be switched off when stationary to prevent exhaust emissions (e.g., there will be no idling vehicles).
- Where practicable, if powered generators are required, the use of mains electricity or battery powered ancillary plant will be considered in place of diesel or petrol alternatives.
- 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.
- Materials that have a potential to produce dust will be removed from site as soon as possible.
- Regular monitoring (e.g., by engineer or Clerk of Works) will take place when dust, particulate matter, and exhaust emissions (DPMEE) generating activities are occurring. In the unlikely event that unacceptable DPMEE 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

Construction of the A68 100 Townfoot bridge A68 road corridor is likely to have removed any archaeological remains that may have been present within the trunk road boundary scheme extents. The potential for the presence of unknown archaeological remains in the study area has therefore been assessed to be low. Moreover, the works do not entail any earthworks or vegetation clearance, and people, ancillary plant, vehicles, NRMM and materials are restricted to areas of made-ground on the A68 100 Townfoot bridge. As such, there is negligible risk of disturbing or damaging previously undiscovered or unrecorded items of cultural interest.

There is no connectivity between the scheme and the listed buildings or scheduled monument. Moreover, the works do not include any alterations that would affect the historic and architectural character of these features. In addition, there will be no material or visual change to the Jedburgh Conservation Area. As such, application for consent or any other permission is not required. With the implementation of mitigation detailed below, the proposed works 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.

Proposed cultural heritage mitigation measures:

- People, ancillary plant, vehicles, NRMM and materials must be restricted to areas of made/engineered ground (as much as is reasonably practicable). Where access outwith made/engineered ground is required for the safe and effective completion of the scheme, the area must be reduced as much as is reasonably practicable, and ideally should be accessed on foot.
- If a change to the construction programme onsite is required that necessitates earthworks or vegetation clearance, BEAR Scotland's Environmental Team should be contacted.

Landscape and visual effects

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 TM.

However, people, ancillary plant, vehicles, NRMM and materials are restricted to areas of made-ground on the A68 100 Townfoot bridge, and construction works are programmed to be undertaken at night (5-nights). As such, the visual impact of the works will be somewhat reduced.

Considering the nature, duration, size, and scale 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., the works involve only like-for-like replacement of worn expansion joints.

Proposed landscape and visual effects mitigation measures:

- Construction vehicles will not be left in places where soil or vegetation can be damaged. If damage to road verge occurs this will be lightly cultivated or graded (upon completion of the works) to allow natural recolonization by local species and promote integration with existing landscape character.
- The site will be monitored regularly for signs of litter and other potential contaminants and litter will be removed before and after works take place.
- The site will be left clean and tidy following construction.

Biodiversity

A HRA Stage 1 Screening was undertaken and determined that the scheme would have no Likely Significant Effects (LSE) on the qualifying features of the River Tweed SAC.

The PEA did not note any evidence of any mammal species of conservation importance within the area of likely construction disturbance.

The PEA did not note any INNS, injurious weeds or invasive native perennials within the trunk road boundary scheme extents.

There is no requirement for earthworks, destruction or removal of vegetation, permanent (or temporary) land-take, accommodation works, site clearance or locally gained resources. As such, the works do not involve any physical altering or removal of habitat or result in habitat fragmentation.

A temporary short-term increase in noise levels may cause disturbance to local wildlife. 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 expansion joint replacement. 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 road noise on the A68 and the scheme is of short duration (5-nights). The potential for significant species disturbance within the area of likely construction disturbance is therefore somewhat diminished.

Considering the nature, duration, size, and scale 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.

Upon completion of the works, no residual impacts are anticipated in relation to biodiversity.

Proposed biodiversity mitigation measures:

- Works will not commence until later in the winter period (late January or February) to allow a single WHI to be carried out by a licensed bat ecologist in advance of the works (during mid-January). Should any bats be found in the vicinity of the works, construction will not commence until NatureScot is consulted, and a licence obtained.
- Site personnel should remain vigilant for the presence of any protected species throughout the works period. Should a protected species be noted during construction, works should temporarily halt until the species has sufficiently moved on. Any sightings of protected species should be reported to the BEAR Scotland Environmental Team.
- 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 must be gradually increased over a period of 30 minutes to permit animals (and birds) to move away from the disturbance.
- Where possible, artificial lighting used during night works will be sufficiently screened and aligned so as to ensure that there is no direct illumination of neighbouring habitat (e.g., locations adjacent to tree shelterbelt, woodland, Jed Water/Raven Burn (Kaim Burn confluence to Teviot Water)etc.) to ensure minimal impact on nocturnal species.
- All equipment stored onsite will be checked at the start of each workday to ensure protected species, and any other mammal species, are not present. Any storage containers/plant within the compound will also be secured overnight to prevent exploration by protected species (and any other mammal species). Any areas where an animal could become trapped (e.g., storage containers) will also be covered at the end of each working day, to avoid mammals falling in and becoming trapped.
- People, ancillary plant, vehicles, NRMM 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, 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: (i) unforeseen site clearance is required, (ii) unplanned works must be undertaken outwith the carriageway boundary, (iii) there is any deviation from the agreed plan, programme and/or method of working, (iv) nesting birds are found onsite.

Geology and soils

Bridge schemes have the potential 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, works are minor in nature and are restricted to like-for-like replacement of worn expansion joints, with all works restricted to made-ground on the A68 100 Townfoot bridge. The work corridor is also not located within a GCRS, geological SSSI or LGS.

Considering the nature of the scheme, and with 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 negligible in magnitude.

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

Proposed mitigation measures:

- If any contaminated land requiring remediation were encountered, it will be contained and/or removed in a safe and controlled manner to the standards required by SEPA. Any removal of potentially hazardous material is likely to constitute a net positive impact as this will remove the risk of any future contamination.

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.

Considering the nature, duration, size and scale 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 on materials or waste.

Proposed material and waste mitigation measures:

- 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 will also be completed/retained. Good materials management methods (e.g., 'just-in-time' delivery) will be implemented wherever possible.

- Designated areas will be identified within which all materials and personnel, including construction compounds, will be contained 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 avoid sensitive locations such as road drainage and surface waterbodies. 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 (if required) 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 COSHH safety data sheets and the Special Waste Regulations 1996. 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 road works will, for example, require a range of ancillary plant, vehicles and NRMM for breaking out the defective joints. Noise will also be generated by using breakers (jackhammers), chipping hammers, use of rollers, etc. As a result, there is potential for noise and vibration effects.

However, the works are not located within a CNMA or CQA, and the proximity of road space suggests that residents will have a degree of tolerance to noise and disturbance. Works will also be completed over 5-nights, with the aim being to complete the noisiest works by 23:00. Works with the potential to induce worst-case scenario noise and vibration (using breakers (jackhammers), chipping hammers, etc.) will also be intermittent, temporary, and short-lived. The potential for disturbance will therefore be somewhat diminished.

Considering the likely sources of noise and vibration, the distance from the point of generation to NSRs, the nature, duration, size and scale of the scheme, and with 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.

Proposed noise mitigation measures:

- Where possible, the noisiest work operations (e.g., using breakers (jackhammers), chipping hammers, use of rollers, etc.) will be completed before 23:00.
- Wherever possible, careful consideration must be given to the siting and orientation of particularly noisy items of NRMM so that it is located away from (if possible, > 20 m from) surrounding properties. Activities which have the potential to produce excessive noise e.g., cutting and grinding of materials must, if possible, also be undertaken away from surrounding properties. 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 NRMM 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. must be avoided (except where there is an overriding justification), and if used must be fitted with mufflers or silencers of the type recommended by the manufacturer.
- Drop heights from vehicles and NRMM will be kept to a minimum to minimise noise when unloading.
- All ancillary plant, vehicles and NRMM 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 NRMM 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, vehicle travellers, and non-motorised road users (NMUs). However, the scheme does not require permanent (or temporary) land-take, accommodation works, site clearance or locally gained resources, and there is no requirement for a Compulsory Purchase Order (CPO). Access for pedestrians and NMUs utilising the footpaths either side of the bridge will not be restricted, and the Core Path spanned by the bridge will not be directly impacted by the works. In addition, the proximity of the trunk road also suggests that pedestrians will have a degree of tolerance to noise and disturbance, and works will be undertaken at night when it is likely that footfall will be low. A TM Plan, which will

include measures to avoid or reduce road traffic disruption, will be produced in accordance with the Traffic Signs Manual (Department of Transport 2009). Moreover, AADT flow is low, TM will only be in place for 5-nights (when traffic flows will be at a minimum), and no congestion issues are noted during the proposed construction hours.

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:

- Construction lighting will take into account the need to avoid illuminating surrounding properties to avoid a nuisance at night, and non-essential lighting will be switched off at night.
- Where appropriate, a communication strategy (e.g., social media, consultation with local authority and other stakeholders, letter drop (for night-time works), 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 of urban development to the scheme extents, Toolbox Talk TTN-042 'Being a Good Neighbour' will be briefed prior to works commencing. 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.
- Journey planning information will be available for drivers online at the trafficscotland.org website. Journey planning information will also be available for drivers online through BEARs social media platforms.
- Advanced signage will be strategically placed on the trunk road to notify stakeholders of the overnight road closure and diversion. Signage will be installed at least 7 days in advance of the road closure.

Road drainage and the water environment

During joint replacement 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 Jed Water / Raven Burn (Kaim Burn confluence to Teviot Water) and surrounding waterbodies.

However, no 'in-water' works are required, therefore there will be no change in the hydrological regime or water quality within Jed Water / Raven Burn (Kaim Burn

confluence to Teviot Water). All land outwith the trunk road boundary is also considered out-of-bounds to all construction staff during the works and there is no requirement for land take, site clearance or resources from within a waterbody. There is also no requirement for the abstraction or transfers of water from a waterbody. The potential for a direct pollution incident within a waterbody is also unlikely e.g., experience gained from BEAR maintenance schemes elsewhere on the network has shown that where standard best working practice is adopted (e.g., adherence to SEPA GPPs or PPGs, utilisation of drain covers or similar, etc.), water quality is protected.

Considering the nature, duration, size and scale 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.

Upon completion of the works, no residual impacts are anticipated in relation to the road drainage and water environment.

Proposed road drainage and water environment mitigation measures:

- No works are permitted to take place within Jed Water / Raven Burn (Kaim Burn confluence to Teviot Water).
- The abstraction or transfers of water, or the washing of tools in Jed Water / Raven Burn (Kaim Burn confluence to Teviot Water) is not permitted.
- An edge protection system (EPS) will be utilised to prevent debris and sediment falling into Jed Water / Raven Burn (Kaim Burn confluence to Teviot Water) below. Sandbags will be located at the bottom of the containment systems and debris netting will cover the EPS.
- 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 10 m 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.
- All site personnel will be made aware of site spillage response procedures and in the event of a spill, all works associated with the spill will stop, and the incident reported to the Site Supervisor. Small spills that did not leave the site boundary and are cleaned up without material environmental harm or residual environmental impact would most likely not be required to be notified to SEPA or other authorities. However, all such incidents must to be recorded and reported to BEAR Scotland's Environmental Team. In the event of a 'serious incident', SEPA will be notified without delay. Such notification will include: (i) the time and duration of the incident, (ii) a description of the cause of the incident, (iii) any effect on the environment as a result of the incident, and (iv) any measures taken to minimise or mitigate the effect and prevent a recurrence.

- All waste, vehicles, ancillary plant, NRMM and fuels will be stored in the compound(s) or laydown area and will be secured and located, if space is available, at least 10 m from drainage entry points and Jed Water / Raven Burn (Kaim Burn confluence to Teviot Water), 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 >10 m from drainage entry points and Jed Water / Raven Burn (Kaim Burn confluence to Teviot Water), 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 NRMM, where there is a risk of leakage of oil or fuel, will have internal bunding or must 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, NRMM 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 will be conducted (e.g., site walkover by engineer or Site Supervisor), especially during periods of heavy rain.
- All vehicles and NRMM onsite will have been regularly maintained, paying attention to the integrity of oil tanks, coolant systems, gaskets etc. A checklist must 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 expansion joint replacement works will also extend the maintenance intervals required for future works. In doing so, the service life of the A68 100 Townfoot bridge 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 at local waste management facilities.

Vulnerability of the project to Major Accidents and Disasters

The A68 100 Townfoot bridge is not at risk of surface water flooding.

Works are restricted to areas of made-ground on the A68 100 Townfoot bridge, with access to the scheme gained via the A68. TM will employ overnight lane closures and full road closures. Pedestrians and NMUs will be accommodated within TM arrangements. 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.

A search of the Scottish Borders Council Planning Portal ([Map Search](#)) confirmed that there are five planning applications within 300m of the scheme:

- Change of use of former café to provide shop (Decided)
- Internal alterations (Registered)
- Extension to dwellinghouse (Decided)
- Alterations to form accessible entrance (Decided)
- Alterations and extension to dwellinghouse (Decided)

Considering the nature, scale and size of the planning applications and the works being undertaken BEAR, it is unlikely that the proposed works will have a significant cumulative effect.

Assessments of the environmental effects

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 completed 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 above 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:

- The total working area is less than 1 ha.
- Works are restricted to like-for-like replacement of expansion joints, with all works restricted to made-ground on the A68 100 Townfoot bridge.
- Works are programmed to only take 5-nights to complete, with the aim being to complete the noisiest works by 23:00.
- No works are required within Jed Water / Raven Burn (Kaim Burn confluence to Teviot Water), which is spanned by the A68 within the scheme extents, therefore there will be no change in the hydrological regime or water quality within Jed Water / Raven Burn (Kaim Burn confluence to Teviot Water).
- Works are not expected to result in significant disturbance to protected species that may be present in the wider area.
- No INNS, invasive native perennials, or injurious flowering plant species have been recorded within the scheme extents.
- No in-combination effects have been identified.
- The risk of major accidents or disasters is considered to be low.
- Joint replacement works will improve safety on the bridge and protect against future deterioration of the structure. 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 A68 100 Townfoot bridge. In doing so, the service life of the structure is also extended.

Location of the scheme:

- Although the works are spanned by the River Tweed SAC, the high-level HRA screening confirmed that the works will not result in LSE on the qualifying features of the SAC.
- There will be no material or visual change to the Jedburgh Conservation Area.
- 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.

Characteristics of potential impacts of the scheme:

- Any potential impacts of the works are expected to be temporary, short-term, not significant, and limited to the construction phase.
- With good practice pollution prevention measures implemented onsite, there is a negligible risk of a pollution event e.g., compliance with the SEMP.
- As the works are restricted to the like-for-like replacement of worn expansion joints, 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 impacts on the environment are expected during the operational phase as a result of the works.

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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