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# Environmental Impact Assessment Record of Determination

## A68 Whitslaid to Boon

# Contents

# Project Details

## Description

BEAR Scotland has been commissioned by Transport Scotland to carry out resurfacing works on the A68 carriageway. The works will consist of surface course inlay to 120mm, with areas of partial reconstruction to depths of 280mm. The works will also involve the reinstatement of road markings and studs for a length of 1506m (1.5ha).

The construction activities for the resurfacing procedure are as follows:

- Set up traffic management (TM) and mark out site.
- Milling of existing bituminous material by road planer.
- Jackhammer and compressor for breaking up surfaces not accessible by planer (e.g. around gullies).
- Loader/excavator used to collect and move excess material.
- Sweeper to collect loose material and provide clean laying surface.
- Milled out/excavated materials all taken off site.
- Tack/bond coat laid.
- Base / binder material laid and compressed by paver (where required).
- Material compacted using a heavy roller.
- New bituminous surface course material laid by paver.
- Material compacted using a heavy roller.
- Mechanical sweeper to collect loose material.
- HGV for removal and replacement of material.
- Road markings and studs applied where necessary (in accordance with the Traffic Signs Manual, Chapter 5).
- Remove TM and open road.

The works are currently programmed to be completed within 2024/2025 financial year, with works expected to begin on 10th February 2025. Works are programmed to be completed over seven nights (19:30 – 06:00). Traffic Management (TM) will involve full night-time road closures with a signed diversion via the A697 to the A6089, through the A6105 and rejoining the A68 at Earlston.

# Location

The scheme lies on the A68 carriageway approximately 1.7km south east of Lauder (Figure 1), within the Scottish Borders and is predominantly bordered by agricultural land.

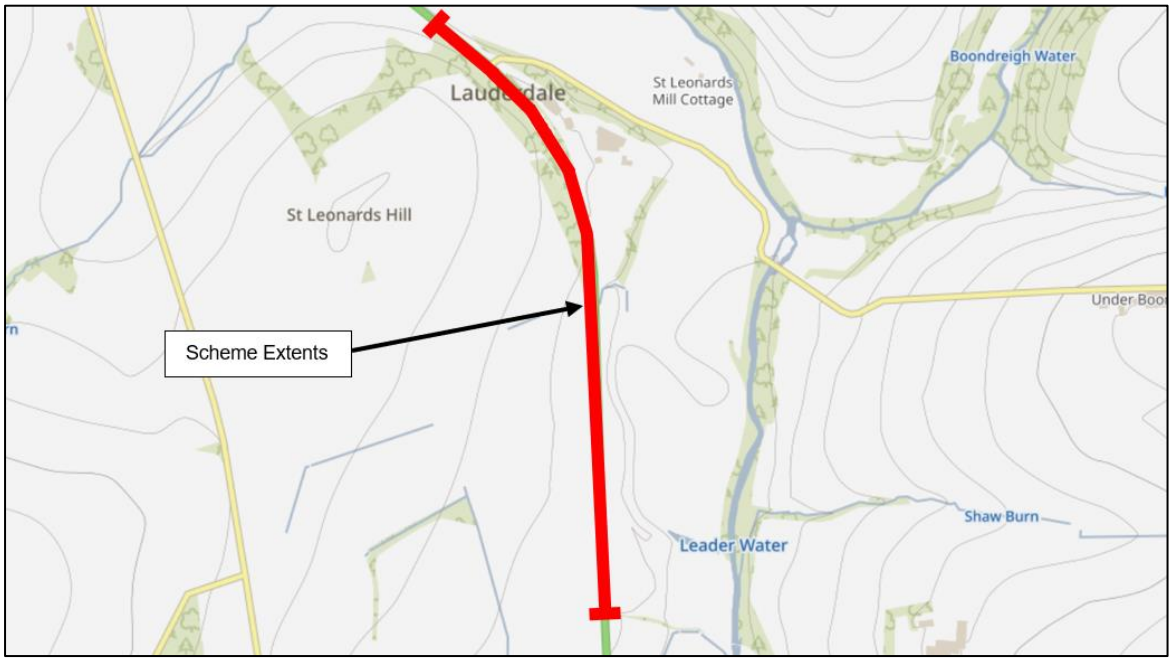


**Figure 1: Extent of the works** - Source: Asset Management Performance System (AMPS). © Europa Technologies Ltd. Contains Ordnance Survey data © Crown copyright and database right 2018.

# Description of local environment

## Air quality

Receptors – refer to 'Population and Human Health'.

A search of the Air Quality in Scotland online mapping records that 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 the Scottish Borders Council, which has no Air Quality Management Areas (AQMAs) within its administrative boundary. The nearest AQMA lies within the boundary of East Lothian Council, 'High Street, Musselburgh', approx. 33.4km north west of the scheme and has been declared for nitrogen dioxide ($NO_2$).

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

- Station Buildings Poultry Farm, Lauder – Intensive Livestock Production and Aquaculture, declared for ammonia, lies approx. 3.4km north west of the scheme.
- Cottage Wood Poultry Farm, Earlston – Intensive Livestock Production and Aquaculture, declared for ammonia, lies approx. 4.6km south east of the scheme.
- West Morriston Free Range Poultry, Earlston – Intensive Livestock Production and Aquaculture, declared for ammonia, lies approx. 5.9km south east of the scheme.
- Springfield Poultry Farm – Intensive Livestock Production and Aquaculture, declared for ammonia, lies approx. 6.9km south east of the scheme.
- Addistone Poultry Farm – Intensive Livestock Production and Aquaculture, declared for ammonia and particulate matter ($PM_{10}$), lies approx. 5.6km south east of the scheme.
- Standingstone Poultry Farm, Earlston – Intensive Livestock Production and Aquaculture, declared for ammonia, lies approx. 6.6km south east of the scheme.
- East Langlee Landfill Site, Galashiels – Waste and Waste-Water Management, declared for chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), methane and methyl chloroform, lies approx. 8.9km south west of the scheme.

Baseline air quality in the study area is mainly influenced by vehicles travelling along the A68 trunk road. Secondary sources are derived from vehicles travelling along nearby local network roads and day-to-day agricultural land management activities.

## Cultural heritage

The PastMap and Historic Environment Scotland (HES) online mapping tools records approx. 26 undesignated cultural heritage assets (UCHAs) within 300m of

the scheme extents, one of which has connectivity to the scheme (i.e., lies < 15m from the scheme extents):

- St Leonards Historic Environment Record (HER) lies within the scheme extents.

There are no designated sites within 300m of the scheme extents.

Construction of the A68 carriageway 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 is therefore assessed to be low.

Factor has no constraints that are likely to be impacted by the proposed works and has therefore been scoped out of further environmental assessment.

## Landscape and visual effects

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

The Landscape Character Type (LCT) within the study area is 'Pastoral Upland Fringe Valley' (no. 117) (Scottish Landscape Character Types). The key characteristics of which are:

- Medium scale pastoral valley with flat floor enclosed by upland fringe pastures, often with rough grassland and moorland covered hills above.
- Smooth large scale landform modified in places by bluffs and moraine on valley floor, scree slopes or rock outcrops on valley sides.
- Narrow, often wooded tributary side valleys.
- Broadleaf woodlands and scrub on bluff slopes and scattered trees along river banks, occasional coniferous plantations and shelterbelts on valley sides.
- Valley floor pastures enclosed by drystone dykes with occasional hedgerows, interspersed with occasional patches of scrub, coarse grass and rushes.
- Scattered villages, farmsteads and mansion houses with policy woodlands.

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

- Rectilinear fields and farms.
- Plantation.
- Managed woodland.

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

- 'Class 3.1' - Land capable of average production though high yields of barley, oats and grass can be obtained. Grass leys are common.

One area of woodland on the Native Woodland Survey of Scotland (NWSS) lies within 300m of the scheme extents:

- Nearly-native wet woodland (approx. 2.1ha) lies adjacent to the southbound carriageway within the northern extents of the scheme.

In addition, one area of broadleaved woodland (approx. 5.7ha) lies adjacent to the northbound carriageway within the northern extents of the scheme, however is not present on the NWSS.

There are no areas recorded on the Ancient Woodland Inventory Scotland within 300m of the scheme extents and there are no trees 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 moderate-volume fast-flowing traffic, road markings, signage, landscaping etc. The scale of the trunk road detracts from the quality and character of the wider landscape.

## Biodiversity

The NatureScot Sitelink online mapping tool identifies that the scheme lies approx. 180m north east of the River Tweed SAC.

The scheme does not share connectivity with or lie within 2km of any other European Sites.

There is one Local Nature Conservation Sites (LNCS) within 300m of the scheme extents:

- Boon Bridge lies approx. 280m east of the scheme.

There are no Sites of Special Scientific Interest (SSSIs) or Local Nature Reserves (LNRs) designated for biodiversity features within 300m of, or which share connectivity with the scheme extents.

A search of the NBN online mapping tool records no plant species listed within the Network Management Contract within 2km of the scheme (within the last 10-years).

A search of the Asset Management Performance System (AMPS) online mapping tool records rosebay willowherb *(Chamaenerion angustifolium)*, an invasive native perennial, throughout the scheme extents (2014, 2018, 2021).

Habitat immediately bordering the trunk road tends to be of low intrinsic value because the existing road verge is subject to cyclic maintenance e.g., grass cutting, weed control, tree, and shrub cut-back etc. The roadside verges are comprised of homogenous managed areas of semi-improved grassland alongside sections of broadleaved woodland, tree lines and scrub. Roadside vegetation generally offers low ecological habitat value due to its limited scale, fragmented nature and high

potential for disturbance owing to cyclic 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 both arable and pastoral land. Leader Water / River Tweed lies east of the scheme with riparian woodland bordering the watercourse likely supporting a variety of species. In addition, linear features such as hedgerows and trees lines along at field boundaries within the wider area also provide suitable habitat for a variety of wildlife, both as corridors in an intensively managed landscape, and as habitats for birds and small animals.

An ecological survey was undertaken on 28th November 2024 to identify any potential ecological constraints associated with the works as Milsie Burn lies culverted below the A68 approx. 60m north of the scheme extents and is a tributary of the River Tweed SAC which lies approx. 180m north east of the scheme extents.

## Geology and soils

The A68 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 beneath the scheme extents as ‘Brown Soils’.

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

- Till, Devensian (Diamicton).

The bedrock geology within the scheme extents is recorded as:

- Great Conglomerate Formation, Conglomerate and [Subequal/Subordinate] Sandstone – Interbedded.

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

Factor has no constraints that are likely to be impacted by the proposed works and has therefore been scoped out of further environmental assessment.

# Material assets and waste

The proposed works are required to replace the worn carriageway surface, reconstruct failed areas of the carriageway, and reinstate road markings. Materials used will consist of:

- TS2010 10mm site class 1/3.
- AC20 dense binder 40/60.
- AC32 dense base 40/60.
- Tack/bond coat.
- Paving grade bitumen to seal vertical faces.
- Eurolite thermoplastic road markings.
- Embedded road studs.

As the value of the scheme is greater than £350,000, a Site Waste Management Plan (SWMP) is required for these works.

The 1506m scheme involves removal of the surface course and localised areas of base and binder. In total, approx. 6734.5 tonnes of bituminous material (European Waste Catalogue Code: 17 03 02) will be removed from site, 834.5 tonnes of which are classified as hazardous material containing coal tar.

# Noise and vibration

Receptors – refer to 'Population and Human Health'.

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

The night-time modelled noise level (Lngt) ranges between 60 and 65 decibels within the scheme extents (Scotland's Noise), with levels dropping to between 50 and 55 decibels at the nearest noise sensitive receptor (NSR) (residential property).

The baseline noise and vibration in the scheme extents is primarily influenced by vehicles travelling along the A68 trunk road. Secondary sources most likely arise from day-to-day agricultural activities and from motor vehicles travelling along nearby roads.

# Population and human health

Eight properties and one farmstead are within 300m of the scheme extents, the closest of which lies approx. 22m east of the scheme extents and is screened from

the works by tree shelterbelt (approx. 17m wide). All other properties are screened from the scheme by tree shelterbelt and intervening properties.

One bus stop is located within the scheme extents on the northbound carriageway.

There are no non-user motorised (NMU) or community facilities with connectivity to the scheme extents.

Street lighting is not present within the scheme extents.

The A68, within the scheme extents, is a single carriageway with the national speed limit applying throughout. The Annual Average Daily Traffic (AADT) flow is low (6,002 motor vehicles (ID: 40732, 2023)) (Road Traffic Statistics).

## Road drainage and the water environment

The Scottish Environment Protection Agency (SEPA) River Basin Management Plan online mapping tool records one classified surface waterbody within 300m of the scheme extents:

- Leader Water / Kelhope Burn (Cleekhim Burn confluence to River Tweed) is located approx. 180m north east of the scheme extents and is a tributary of the River Tweed (ID: 5266). It is also within the River Tweed catchment of the Solway Tweed river basin district with a main stem of 23.2km. This waterbody is assessed as being heavily modified with an overall status of moderate ecology potential.

The following unclassified waterbodies are found within 300m of the scheme extents:

- Milsie Burn lies approx. 60m north of the scheme, culverted below the A68 and is a tributary of Leader Water / River Tweed.
- One drain, hereafter referred to as Drain1, lies approx. 17m east of the southbound carriageway and is separated from the scheme by tree shelterbelt.
- One drain, hereafter referred to as Drain2, lies approx. 133m west of the scheme and is separated from the scheme by agricultural land.
- One pond, hereafter referred to as Pond1, lies approx. 148m east of the scheme. It is separated from the scheme by arable land and Whinny Braes.
- One drain, hereafter referred to as Drain3, lies approx. 153m south east of the scheme. It is separated from the scheme by arable land and riparian woodland which borders the drain.

A search of the SEPA's Flood Map online mapping tool records that one section (approx. 82m long of the A68 within the scheme extents is recorded as having a high likelihood of surface water flooding (i.e., each year this area has a 10% chance of flooding). In addition, the A68 just outwith the section with a high likelihood of surface water flooding, is recorded as having a medium risk of surface water flooding (i.e., each year this area has a 0.5% chance of flooding).

A search of Scotland's Environment (SE) online mapping tool determined that the trunk road lies on the 'Lauder' groundwater, which has been classified as 'Good'.

The scheme extents are not located within a Nitrate Vulnerable Zone (NVZ).

# 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 (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). 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).

# 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 impacts to local air quality.

However, considering the nature and duration of the scheme, along 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.

Air quality mitigation measures:

- A water-assisted dust sweeper will sweep the carriageway after dust-generating activities, and waste will be contained and removed from site as soon as is practicable.
- Materials that have a potential to produce dust will be removed from site as soon as possible, and vehicles that remove cold-milled material from site will have sheeted covers.
- 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).
- 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 that have the potential to impact local air quality are occurring. In the unlikely event that unacceptable dust 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.

# Landscape and visual effects

During construction there will be a short-term impact on the landscape character and visual amenity of the local area due to the presence of construction plant, vehicles, and TM. However, all construction is restricted to areas of made/engineered ground on the A68 carriageway, and works are programmed to be undertaken at night (seven 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 and visual effects are assessed as temporary, negligible adverse in magnitude.

Upon completion of the works, no residual impacts on landscape and visual effects are anticipated e.g., when complete the visual appearance will remain largely unaffected, with a renewed road surface being the only discernible change.

Landscape and visual effects mitigation measures:

- 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.
- Where possible, construction vehicles will not be left in places where soil or vegetation can be damaged. If damage to road verge occurs this must be lightly cultivated or graded (upon completion of the works) to allow natural recolonization by local species and promote integration with existing landscape character.

# Biodiversity

The A68 within the scheme extents lies approx. 60m north of Milsie Burn, which is a tributary of Leader Water, which is part of the River Tweed SAC. As such a Habitats Regulations Appraisal (HRA) proforma has been undertaken which could not rule out the potential for Likely Significant Effects (LSE) on the River Tweed's SAC qualifying features. An Appropriate Assessment (AA) was therefore undertaken which concluded that following the implementation of mitigation measures the works would not result in an adverse effect on site integrity (AESI) to any of the qualifying features.

A temporary short-term increase in noise levels may cause disturbance to local wildlife, if present in the vicinity of the works. 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 resurfacing of the trunk road. 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 A68. 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 above, the proposed works 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.

Biodiversity mitigation measures:

- 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 etc.).
- Given the presence of rosebay willowherb within the verge throughout the scheme extents, Toolbox Talk TTN-009 'Working with Injurious Weeds & Invasive Plants' will be briefed to all staff prior to works commencing. Site personnel will remain vigilant for the presence of any other potentially unrecorded instances of invasive or injurious species in road verges throughout the works period.
- 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 BEARs Environmental Team. Should a protected species be encountered or move within 50m of the active works (including compounds), works will be temporarily halted until the animal(s) move at least 50m away from the construction site, or until BEAR's 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, if necessary, will be checked at the start of each shift to ensure no animals are present. Any storage containers/plant within the compound will also be secured overnight to prevent exploration by 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.
- 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:

  - unforeseen site clearance is required,
  - unplanned works must be undertaken out with the carriageway boundary,
  - 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.

## 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 also 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.

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.

Material assets and waste mitigation measures:

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

- The Contractor will comply with all 'Duty of Care' requirements, ensuring that any surplus materials or waste are stored, transported, treated, used, and disposed of safely without endangering human health or harming the environment. Waste transfer notes and/or waste exemption certificates (if required) will also be completed and retained.
- The Contractor is responsible for the reuse / disposal of non-hazardous road planings, and this has been registered in accordance with a Paragraph 13(a) waste exemption issued by SEPA as described in Schedule 3 of the Waste Management Licensing Regulations 2011 (exemption number: WML/XS/2008127), the rules of which will be complied with.
- Approximately 834.5 tonnes of bituminous material classified as hazardous due to the presence of coal tar will be appropriately processed of in line with Transport Scotland's Guidance Note on dealing with coal tar bound arisings (Coal Tar Guidance). This will include, but not be limited to:
    - Coal tar contaminated road planings will be classified as a Special Waste.
    - All waste will be appropriately segregated, with coal tar contaminated planings being kept separate from uncontaminated planings.
    - Coal tar contaminated road planings will be transported by a registered waste carrier and be accompanied by a SEPA-issued consignment note or code. SEPA will be notified, at least 72 hours before and no longer than one month before, prior to Special Waste leaving site. The approx. 834.5 tonnes being disposed of will be sent to a facility that holds suitable pollution prevention and control permits and waste management licences. Copies of consignment notes will be retained for a period of three years.
    - Waste will be transported in a safe and secure manner to prevent the release of contaminated material en-route
- Designated areas will be identified within which all materials and personnel, including construction compounds, where necessary, 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. 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 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 road works will, for example, require a range of ancillary plant, vehicles and NRMM for cold milling in preparation for carriageway resurfacing. 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 to residential properties within the local area, the closest of which lies approx. 22m east of the A68 within the scheme extents.

However, the works are not located within a CNMA or CQA, and works will also be completed over seven nights, with the aim being to complete the noisiest works by 23:00. In addition, the proximity of road space suggests that residents have a degree of tolerance to noise and disturbance.

The road surface is in a poor condition, with a series of defects. Replacing the life-expired surface course with TS2010 road surfacing affords the benefits of a reduction in mid-to-high frequency traffic noise and a reduction in the ground vibrations. As a result, upon completion of the work, noise associated with the movement of vehicles on the trunk road should decrease post construction.

Considering the likely sources of noise and vibration, with 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.

Noise and vibration mitigation measures:

- The local authority environmental health department will be notified of nighttime working by BEAR Scotland's design engineer.
- Where possible, the noisiest work operations (e.g., cold milling, using breakers (jackhammers), chipping hammers, use of rollers, etc.) will be completed before 23:00.
- Wherever possible, careful consideration will be given to the siting and orientation of particularly noisy items of NRMM so that it is located away from surrounding properties. Activities which have the potential to produce

excessive noise will be undertaken away from surrounding properties, if possible.

- 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 characteristics 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 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 and road users. However, TM will only be in place for seven nights (when traffic flows will be at a minimum), as such no congestion issues are expected during the proposed construction hours.

One bus stop is located within the northern extents of the scheme which is likely to be impacted by the works and road closure. However, works will be undertaken at night when usage of these community assets are expected to be lower. With mitigation measures detailed below implemented on site 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 above, impacts on population and human health are assessed as temporary, minor adverse in magnitude.

Upon completion of the works, there will be a positive impact in relation to population and human health due to the improvement of usability and safety provided by the new carriageway surface.

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 residential properties Toolbox Talk TTN-042 Being a Good Neighbour will be briefed to staff prior to the commencement of works.
- Where necessary, NMU's will be accommodated within TM arrangements to ensure their safe passage through the site.
- Advanced signage will be strategically placed on the trunk road to notify stakeholders of the road closure and diversion at least seven days in advance.
- 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 resurfacing 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 surrounding waterbodies such as the Leader Water / River Tweed.

However, all works will be restricted to the A68 carriageway and there will be no requirement to enter any watercourse as such there is limited risk for direct impacts. Furthermore, the potential for direct or indirect pollution incident to a waterbody is

considered 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, 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 resurfacing works, no residual impacts are anticipated in relation to the road drainage and water environment.

Road drainage and the water environment mitigation measures:

- Site operatives will be made aware of the location of Leader Water / River Tweed.
- If any works are identified that would require entering a waterbody, BEAR Scotland's Environmental Team will be contacted (before works commence) to allow consideration of potential environmental effects.
- The abstraction or transfers of water from, discharges to, or the washing of tools in surface waterbodies identified is not permitted.
- Appropriate measures will be implemented during resurfacing operations to limit the potential for wastes (i.e. road planings) and materials (i.e. new asphalt) to enter any gullies present on site. On completion of resurfacing operations, any gullies present on site will be visually checked to ensure they have not become blocked as a result of the scheme.
- 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 will 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 10m from drainage entry points, 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, 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 (particularly near road drainage entry points) 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 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 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 and adverse in magnitude.

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

Climate mitigation measures:

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

# Vulnerability of the project to risks

There will be no change to the likelihood of flooding on the A68 within the scheme extents upon completion of the works.

Works are restricted to areas of made ground on the A68 carriageway surface, with access to the scheme gained via the A68 mainline. TM will employ a full road closure with a signed diversion. Furthermore, while one bus stop is located within the northern extents of the scheme, mitigation measures will minimise impacts to these assets as far as is possible. As such, the proposed works' impacts on road traffic accidents are 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 of major accidents and disasters is considered to be low.

## Assessment 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.

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 A68 trunk road or surrounding roads in proximity to the scheme which will be undertaken at the same time.

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

# Assessments of the environmental effects

The A68 Whitslaid to Boon scheme lies approx. 60m south of a tributary of the River Tweed SAC and is located at its closest approx. 180m north east from the SAC boundary, as such, a HRA has been undertaken. The HRA has assessed 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 has been undertaken who are satisfied with the conclusion.

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) exceed 1 hectare in area.

The project has been subject to screening using the Annex III criteria to determine whether a formal Environmental Impact Assessment 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 replacement of worn/damaged road surface, with all works restricted to made ground on the A68 carriageway surface.
- Works are not expected to result in significant disturbance to protected species that may be present in the wider area.
- The risk of major accidents or disasters is considered to be low.
- By removing the carriageway defects, this will provide this section of the A68 carriageway with another life cycle, and significantly improve the ride quality, which will result in safer conditions for road users.

- Any potential impacts of the works are expected to be temporary, short-term, not significant, and limited to the construction phase.

Location of the scheme:

- The scheme is located approx. 180m south west of 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 areas.
- Land use will not change as a result of the works.
- The works do not require any private land acquisition.
- 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.
- Works are programmed to take seven nights to complete, with the aim being to complete the noisiest works by 23:00.
- With good practice pollution prevention measures implemented onsite, there is a negligible risk of a pollution event e.g., compliance with the SEMP.

# 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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Published by Transport Scotland, February 2025

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