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# Environmental Impact Assessment Record of Determination

**A7 North of Linhope** 

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# **Project Details**

## Description

BEAR Scotland has been commissioned by Transport Scotland to carry out resurfacing works on the A7 carriageway. The works will consist of resurfacing to mixed depth inlays of 100mm, 130mm, 150mm and 190mm. The works will also involve the reinstatement of road markings and studs for a length of 1933m (approx. 1.4ha).

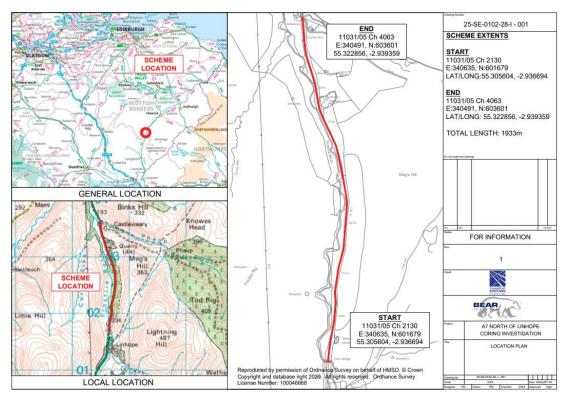
The construction activities for the resurfacing procedure are as follows:

- 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.
- 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 the 2025/2026 financial year with works expected to begin on 29<sup>th</sup> July 2025. Works are programmed to be completed over 13 nights, excluding Saturdays and Sundays (19:30 – 06:00). Traffic management (TM) will involve a full road closure of the A7 south of Teviothead with a signed diversion in place via the A699, A6088, B6357 and B7201.

# Location

The scheme lies on the A7 carriageway within the Scottish Borders, approx. 0.3km north of Linhope and is predominantly bordered by agricultural land (Figure 1).



**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 <u>Air Quality in Scotland</u> 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 Scottish Borders Council, which has no Air Quality Management Areas (AQMAs) within its boundary. The closest active AQMA, 'High Street, Musselburgh', lies within the boundary of East Lothian Council approx. 69km north of the scheme and has been declared for nitrogen dioxide (NO<sub>2</sub>).

There are no sites registered on the Scottish Pollutant Release Inventory (<u>SPRI</u>) for pollutant releases to air within 10km of the scheme within the last 10 years.

Baseline air quality in the study area is mainly influenced by vehicles travelling along the A7 trunk road. Secondary sources are derived from day-to-day woodland and agricultural land management activities.

# **Cultural heritage**

The <u>PastMap</u> and <u>Historic Environment Scotland (HES)</u> online mapping tools records no designated sites within 300m of the scheme extents.

Of lesser cultural heritage value, four undesignated cultural heritage assets (UCHAs) lie within 300m of the scheme extents, the closest of which lies within the northern extents of the scheme:

• Castleweary Historic Environment Record (HER), which relates to a possible Tower House (Medieval).

Construction of the A7 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.

While one UCHA is located within the scheme extents, the works will be restricted to the existing boundary and depth of the carriageway and will not be at risk of impacting this feature. Therefore, it is considered that there is no potential to impact upon cultural heritage and as such this topic has 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 Types (LCT) within the scheme extents are 'Southern Uplands with Scattered Forest - Borders' (no. 93) (<u>Scottish Landscape Character</u> <u>Types</u>). The characteristics of which are:

- Large-scale rolling landform with higher dome or cone-shaped summits.
- Significant areas of peatland and heather moorland.
- Mosaic of grassland, bracken and rushes on lower ground.
- Locally-prominent scattered large areas of forestry.
- Degree of remoteness, wild character and grandeur of scale unique within the region.

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

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

The <u>national scale land capability for agriculture</u> classifies land surrounding the scheme as being:

• 'Class 5.3' - Land capable of use as improved grassland. Pasture deteriorates quickly.

There are eight areas on the <u>Native Woodland Survey of Scotland (NWSS)</u> within 300m of the scheme extents:

- Lowland mixed deciduous woodland (approx. 4.6ha) lies adjacent to the scheme.
- Wet woodland (approx. 1.6ha) lies adjacent to the scheme.
- Wet woodland (approx. 0.7ha) lies adjacent to the scheme.
- Wet woodland (approx. 2.4ha) lies approx. 10m northwest of the scheme.
- Wet woodland (approx. 1.9ha) lies approx. 110m east of the scheme.
- Wet woodland (approx. 0.7ha) lies approx. 124m west of the scheme.

- Lowland mixed deciduous woodland (approx. 3.7ha) lies approx. 130m northwest of the scheme.
- Wet woodland (approx. 0.8ha) lies approx. 153m northwest of the scheme.

In addition, four other areas of woodland lie within 300m of the scheme extents:

- Three areas of conifer woodland (approx. 8.7ha total) which lie adjacent to the scheme.
- Broadleaved (approx. 1.3ha total), the closest of which is approx. 120m southeast of the southern scheme extents.

There are no areas of ancient woodland registered on the <u>Ancient Woodland</u> <u>Inventory Scotland</u> within 300m of the scheme extents or 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 fast-flowing traffic, road markings, safety barriers, 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 Frostlie Burn / Linhope Burn which is spanned by the scheme forms part of the River Tweed Special Area of Conservation (SAC). In addition, the scheme lies within the buffer zone of the qualifying species of Langholm – Newcastleton Hills Special Protection Area (SPA).

Langholm – Newcastleton Hills Site of Special Scientific Interest (SSSI) lies approx. 5.2km southeast of the scheme.

There are no additional Sites of Special Scientific Interest (SSSI), <u>Local Nature</u> <u>Conservation Sites</u> (LNCS) or Local Nature Reserves (LNRs) designated for biodiversity features within 300m of the scheme extents.

The nearest record lies adjacent to the scheme extents (recorded 2017). The NBN atlas also holds records of numerous bird species within 2km over a ten-year period. Under the Wildlife and Countryside Act 1981 (as amended), all wild birds and their active nests (typically active March to August inclusive) are protected. Only records with open-use attributions (OGL, CC0, CC-BY) were included in the search criteria.

An ecological survey was undertaken on 10<sup>th</sup> June 2025 to identify any potential ecological constraints associated with the works. All accessible areas of Frostlie Burn / Linhope Burn within 200m of the scheme were surveyed. Habitats adjacent to the western extents of the scheme consist of scattered scrub with a mixture of

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conifer and broadleaved woodland. The eastern extents of the scheme consist of Scots pine plantation and native broadleaved woodland. Invasive native perennial rosebay willowherb (*Chamaenerion angustifolium*) and injurious weed creeping thistle (*Cirsium arvense*) are present throughout the verge of the scheme extents. Habitat where the Frostlie Burn / Linhope Burn crosses the scheme consists of scattered scrub and livestock fields. Frostlie Burn / Linhope Burn in proximity to the works is not likely to offer suitable rest site opportunities given the shallow height of the riverbanks. At the time of the survey, water levels were in spate due to heavy rainfall prior to the survey with the height of the river noted to be close to the top of the bank, which further reduces its suitability for rest sites. As such, no rest sites, or evidence were identified during the survey. However, the watercourse remains suitable to offer commuting and foraging opportunities for in proximity to the scheme. In addition, no invasive non-native species (INNS) and no other signs of protected or notable species identified during the survey.

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

A search of the Asset Management Performance System (AMPS) online mapping tool records no invasive non-native species (INNS), injurious weeds or invasive native perennials within the scheme extents.

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 a homogenous managed areas of semi-improved grassland alongside sections of broadleaved woodland, tree lines and scrub. Roadside vegetation generally offers low ecological habitat 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, grassland surrounding the scheme forms a pattern of open and exposed fields containing arable land with conifer and broadleaved woodland bordering the scheme extents, as well as plantation. Frostlie Burn / Linhope Burn runs parallel to the A7 within the scheme extents before being spanned by the southern extents of the scheme with Mare Sike, a tributary of Frostlie Burn / Linhope Burn, located southeast of the scheme. In addition, Phaup Burn lies directly north of the scheme extents Watercourses and woodland surrounding the scheme are likely to offer suitable opportunities for a number of wildlife.

# **Geology and soils**

The A7 within the scheme extents is not located within a <u>Geological Conservation</u> <u>Review Site</u> (GCRS).

One Local Geodiversity Sites (LGS) lies within 300m of the scheme extents:

• Castleweary Quarry lies adjacent to the southbound carriageway within the scheme extents. The quarry is excavated into near-vertical Silurian Hawick Group (Llandovery) green, fine-grained greywackes with occasional siltstone beds and pink calcite veins. This quarry has the best examples in the Scottish Borders of giant flute casts, as well as many other interesting sole mark features.

Langholm – Newcastleton Hills SSSI lies approx. 5.2km southeast of the scheme and has been designated for a state of 'Carboniferous – Permian Igneous'.

The <u>National Soil Map of Scotland</u> online mapping tool records that the generalised soil type beneath the scheme extents is categorised as:

- Brown Soils.
- Immature Soils.
- Alluvial Soils.

The major soil group beneath the scheme extents is recorded as:

- Brown Soils.
- Alluvial Soils.

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

- Till, Devensian Diamicton.
- Alluvium Silt, Sand and Gravel.

The bedrock geology within the scheme extents is recorded as:

• Hawick Group – Wacke.

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 resurface the worn carriageway and reinstate road markings. Materials used will consist of:

- TS2010 10mm Site Class 1/3.
- AC20 Dense Binder 40/60.
- AC32 Dense Base Course.
- 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 is required for these works.

The 1933m scheme involves removal of the surface course and localised areas of base and binder. In total, approx. 2795 tonnes of bituminous material (European Waste Catalogue Code: 17 03 02) will be removed from site, none of which is classified as hazardous material containing coal tar.

### Noise and vibration

Receptors - refer to 'Population and Human Health'.

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

The night-time modelled noise level (Lngt) ranges between 55 and 60 decibels (dB) within the scheme extents (<u>Scotland's Noise</u>) and at the nearest noise sensitive receptor (NSR) (residential properties).

The baseline noise and vibration in the scheme extents is primarily influenced by vehicles travelling along the A7 trunk road. Secondary sources most likely arise from day-to-day agricultural activities.

### **Population and human health**

Three residential properties lie within 300m of the scheme extents, the closest of which lie approx. 26m east and west of the scheme. The residential property east of the scheme is partially screened by tree shelterbelt however, the property is in clear site of view from its entrance which lies on the A7. In addition, the residential

property west of the scheme is not screened from the scheme. The remaining property lies approx. 200m southeast of the scheme and is fully screened from the scheme.

There are no non-user motorised (NMU) or community facilities with connectivity to the scheme extents. However, two residential access roads are present within the scheme extents.

Street lighting is not present throughout the scheme.

The A7, within the scheme extents, is a dual carriageway with the national speed limit applying throughout. The Annual Average Daily Traffic (AADT) flow is low (1,984 motor vehicles) (ID: <u>JTC00045</u>, 2025)).

### Road drainage and the water environment

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

 Frostlie Burn / Linhope Burn is a river in the River Tweed catchment of the Solway Tweed river basin district (ID: 5259). The main stem is approximately 8.2km in length and runs parallel to the A7 before being spanned by the scheme at the southern extents. The waterbody has been classified as being in 'Poor' condition.

Two unclassified surface waterbodies lie within 300m of the scheme extents:

- Phaup Burn is located immediately north of the northern scheme extents where it is spanned by the A7 and is separated from the trunk road by a kerbed grass verge and metal parapet. It is a tributary of the River Tweed Frostlie Burn / Linhope Burn.
- Mare Sike lies approx. 175m southeast of the scheme and is a tributary of the Frostlie Burn / Linhope Burn.

A search of the <u>SEPA's Flood Map</u> online mapping tool records that two areas on the A7 within the scheme extents are at a low – medium risk of surface water flooding (i.e., each year these areas have a 0.1% and 0.5% chance of flooding). However, Frostlie Burn / Linhope Burn, spanned by the scheme extents, is at a high risk of flooding (i.e., each year this area has a 10% chance of flooding).

A search of <u>Scotland's Environment (SE)</u> online mapping tool determined that the trunk road lies within two separate groundwater classifications, both of which have been classified as being in 'Good' condition:

- Peebles, Galashiels and Hawick.
- Teviotdale Sand and Gravel.

The scheme extents are not located within a Nitrate Vulnerable Zone (<u>NVZ</u>).

# Climate

The <u>Climate Change (Scotland) Act 2009</u> ('The Act'), and its subsequent amendment under the <u>Climate Change (Emissions Reduction Targets) (Scotland)</u> <u>Act 2019</u>, sets the framework for the Scottish Government to address climate change. The Act has an ambitious target to reach Net Zero greenhouse gas emissions by 2045, with any residual emissions balanced by removing carbon dioxide from the atmosphere. This is five years earlier than the rest of the UK due to the greater potential for carbon sequestration in Scotland.

The Act was amended to replace interim targets with carbon budgets. Carbon budgets are legally binding caps on greenhouse gas emissions in Scotland over five-year periods. In line with the Act, the Climate Change Committee (CCC) published advice on the level of Scotland's four carbon budgets, covering the period 2026 to 2045, recommending what the Scottish Government sets its carbon budgets at for annual average levels of emissions. These recommendations are based on an ambitious but credible route to Net Zero for Scotland by 2045.

Emissions reductions from surface transport are the largest contribution to meeting the first two carbon budgets. The pathway for surface transport emission reduction is primarily driven by the uptake of electric vehicles, in addition to measures to enable a shift from car use to public transport and active travel, which all play a role in reducing emissions from fossil fuel cars. Ensuring efficiency of existing transport infrastructure and improving/providing new active travel facilities is therefore important to support these carbon reduction budgets.

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 the above noted legally binding target of netzero by 2045. 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).

# **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 (<u>Design</u> <u>Manual for Roads and Bridges (DMRB)</u>) and Transport Scotland's Environmental Impact Assessment Guidance (<u>Guidance - Environmental Impact Assessments for</u> <u>road projects</u>).

# 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 A7 carriageway, and works are programmed to be undertaken at night (13 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 A7 within the scheme extents spans the River Tweed SAC and lies within the buffer zone for the qualifying species for Langholm – Newcastleton Hills SPA and its associated SSSI. As such, a Habitats Regulations Appraisal (HRA) screening has been undertaken which could not rule out the potential for Likely Significant Effects (LSE) on the River Tweed's SAC qualifying features. However, the HRA screening ruled out potential LSE on the qualifying features of Langholm – Newcastleton Hills SPA and SSSI due to the restriction of the works to the existing A7 carriageway along with the distance and intervening topography separating the works from the SPA.

An Appropriate Assessment (AA) was therefore undertaken for the River Tweed SAC 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.

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A temporary short-term increase in noise levels may cause disturbance to local wildlife if present in the vicinity of the works. Disturbance to local wildlife may occur through the use of plant, vehicles and NRMM which will emit noise and create vibrations. In addition, the works will also require delivery of materials and the presence of personnel to facilitate the improvements to the road surface, which could result in disturbance. 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 A7, furthermore, the scheme is of short duration (13 nights) and will be undertaken on a rolling programme. The potential for significant species disturbance within the area of likely construction disturbance is therefore somewhat diminished.

Of lower concern, invasive native species rosebay willowherb and injurious weed creeping thistle has been recorded within the verge of the scheme extents however, given that the works are restricted to resurfacing of the A7, there is no likelihood of impacting these species.

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.

- All personnel will be made aware of the location and sensitivity / protected status of the River Tweed SAC.
- Artificial lighting used during night works will be sufficiently screened and aligned to ensure that there is no direct illumination of neighbouring habitat (e.g., Frostlie Burn / Linhope Burn, its associated riparian habitat and surrounding woodland) to ensure minimal impact on nocturnal species.
- Given the presence of rosebay willowherb and creeping thistle throughout the verge within the scheme extents, Toolbox Talk TTN-009 'Working with Injurious Weeds & Invasive Plants', will be briefed to all site personnel to the commencement of works.
- 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 must be gradually increased over a period of 30 minutes to permit animals (including birds) to move away from the disturbance.

- 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:
  - o unforeseen site clearance is required.
  - o unplanned works must be undertaken out with the carriageway boundary.
  - $\circ\;$  there is any deviation from the agreed plan, programme and/or method of working.
  - o 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/2010736), the rules of which will be complied with.
- 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 relevant waste regulations. Special waste will also not be mixed with general waste and/or other recyclables.

# **Geology and Soils**

Road 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.

The works corridor lies adjacent to Castleweary Quary LGS however, the works will be restricted to the resurfacing of the existing A7 carriageway boundary and depth and as such will not have any direct impacts to the LGS. Providing mitigation measures detailed below are adhered to the risk of impacts to geology and soils is considered to be negligble.

Upon completion of the works, no residual impacts are anticipated on geology and soils.

Geology and soils mitigation measures:

• Site operatives will be made aware of the location of the Castelweary LGS. No equipment, vehicles, signage or materials will be permitted within the verge at this location.

## 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 lie approx. 26m east and west of the scheme extents.

However, the works are not located within a CNMA or CQA, and works will also be completed over 13 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 lifeexpired 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 (where possible >30m). 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. There is potential for impacts from noise, vibration, visual disturbance and potential for temporary access restrictions due the presence of driveways being within the scheme extents. While TM will be in place for 13 nights, it will be restricted to nighttime hours when traffic flows will be at a minimum with no works on Saturdays or Sundays. As such, no congestion issues are expected during the proposed construction hours.

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:

- Any restriction of access to and from residential properties, directly adjacent to access roads, during resurfacing works, will be minimised as far as possible.
- 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.
- Advanced signage will be strategically placed on the trunk road to notify stakeholders of the road closure and diversion.
- 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 Frostlie Burn / Linhope Burn and Phaup Burn.

However, all works will be restricted to the A7 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 sensitivity and proximity of the Frostlie Burn / Linhope Burn and Phaup Burn.
- 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, Frostlie Burn / Linhope and Phaup Burn, 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 Frostlie Burn / Linhope and Phaup Burn, and 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 A7 within the scheme extents upon completion of the works.

Works are restricted to areas of made ground on the A7 carriageway surface, with access to the scheme gained via the A7 mainline. TM will employ a full road closure with a signed diversion. 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 (<u>map search</u>) has identified one additional instance of planned road works within 300m of the scheme extents. Dayworks involving curing for resurfacing will be carried out by BEAR Scotland for a duration of 15 working days with an expected start between the 28<sup>th</sup> of July and 5<sup>th</sup> of August on the A7 northbound north of Linhope (reference: 3829385). As these relate to curing of resurfacing no construction works will be necessary and the only potential for in-combination impacts relates to the presence of TM. However, given that the A7 North of Linhope scheme is being undertaken at night when traffic levels are expected to be significantly lower the potential for in combination impacts is assessed to be low.

In addition, a search using <u>Scottish Borders Council 'Simple Search'</u> identified one planning application within 300m of the scheme within the last two years (Table 1).

| Reference    | Description   | Status                                   | Distance                 |
|--------------|---|--|--------------------------|
| 25/00325/SCO | Wind farm<br>comprising of 31<br>turbines 217m high<br>to tip | Screening /<br>Scoping Opinion<br>Issued | Approx. 71m<br>northwest |

| Table 1: Planning Applications V | Within Last Two Years |
|----------------------------------|-----------------------|
|----------------------------------|-----------------------|

While it is not possible to gain an understanding on the timing or duration of the above planning application, it is considered that due to this being a screening / scoping opinion the planned works will not be undertaken at the same time as the planned BEAR Scotland resurfacing works, furthermore, as the resurfacing works will be restricted to the existing A7 carriageway boundary and depth there will be no potential for in-combination impacts.

# Assessments of the environmental effects

The A7 North of Linhope scheme spans the River Tweed SAC and lies within the buffer zone of the qualifying species of Langholm – Newcastleton Hills SPA, as such, a HRA has been undertaken. The HRA ruled out the potential for LSE on the Langholm – Newcastleton Hill SPA and 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 to the River Tweed SAC.

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 and are also situated in part in the River Tweed SAC which is a sensitive area within the meaning of regulation 2(1) of the Environmental Impact Assessment (Scotland) Regulations 1999

The project has been subject to screening using the Annex III criteria to determine whether a formal Environmental Impact Assessment 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 A7 carriageway surface.

- Works are not expected to result in significant disturbance to protected species that may be present in the wider area.
- By removing the carriageway defects, this will provide this section of the A7 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 spans 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 lies within the buffer zone of Langholm Newcastleton Hills SPA and associated SSSI, however a HRA has been undertaken which has ruled out LSE on the qualifying features.
- The scheme does not lie within any sites of historical, cultural, or archaeological significance.
- 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 scheme does not lie within any sites of historical, cultural, or archaeological significance.
- 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.

# 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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