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Environmental Impact Assessment Record of Determination

A1 Beanston to Over Hails SB

Contents

Project Details

Description

BEAR Scotland has been commissioned by Transport Scotland to carry out resurfacing works on the A1 carriageway. The works will consist of carriageway resurfacing and reinstatement of road markings for a length of 2.8km (2.59Ha).

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,
- Remove TM and open road.

The works are programmed to be completed within the 2024/2025 financial year with works expected to begin on the 27th of January 2025. Works are programmed to be completed over eight nights (19:30 – 06:00). Traffic Management (TM) is currently programmed to comprise of a full closure of the A1 Southbound with a signed diversion. Traffic will be diverted off of the A1 at Abbotsview Junction onto the A199, then rejoining the A1 carriageway at Thistly Cross Roundabout. The diversion adds an additional 4 minutes and 0.1km to affected journeys.

Location

The scheme lies on the A1 carriageway approximately 2.5km east of the town of Haddington in East Lothian. The scheme extents are surrounded by agricultural land. (Figure 1.).

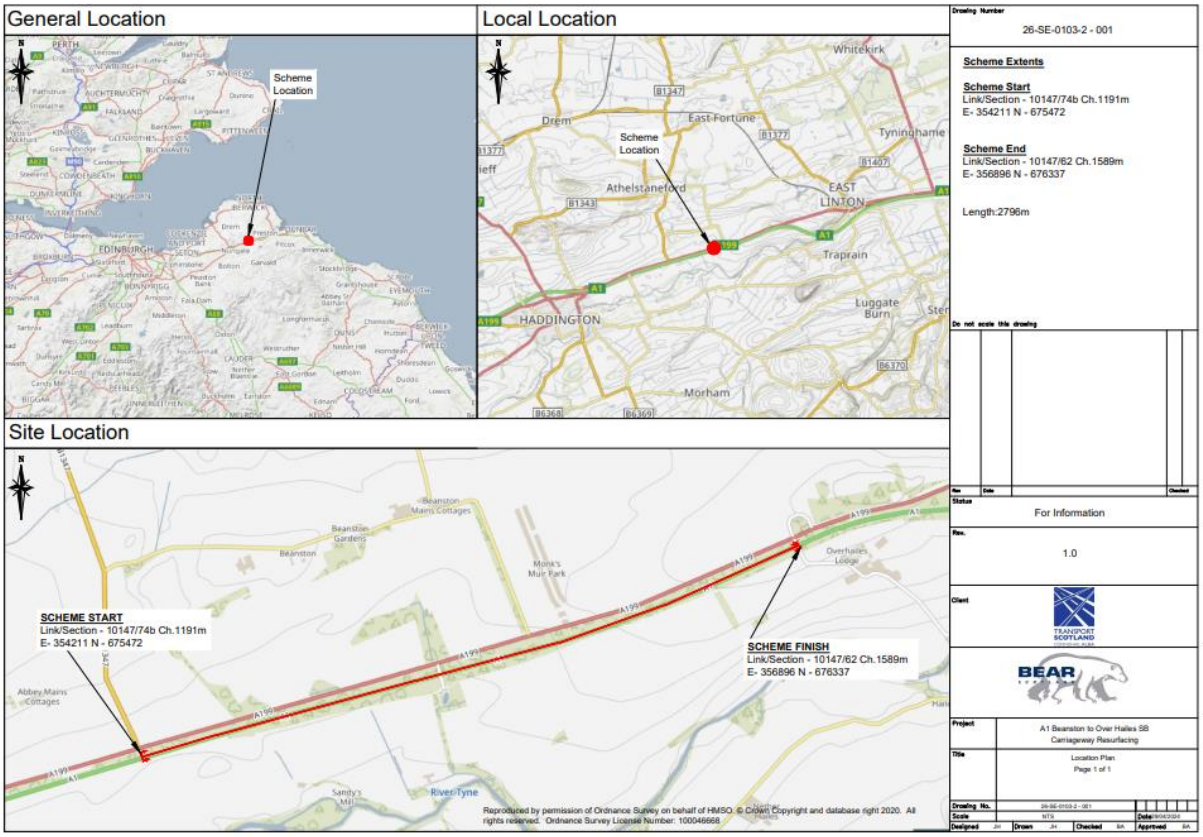

Figure 1. **Extents of the Works**. - Source: Asset Management Performance System (AMPS). © Europa Technologies Ltd. Contains Ordnance Survey data © Crown copyright and database right 2018.

Description of local environment

Air quality

A search of the Air Quality in Scotland online mapping tool records that air quality in the wider bandings to be within the 'green zone' (Low Index 1-3).

The scheme extents are located within the East Lothian Council boundary which currently has one Air Quality Management Areas (AQMAs) within its administrative boundary. The closest AQMA "High Street, Musselburgh" is located approximately 19.7km west of the scheme extents and has been declared for nitrogen dioxide (NO_2).

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

- "Appin Poultry Farm, Drem, East Lothian" – declared for Ammonia – located approximately 4.35km north of the scheme extents.
- Ferrygate Farm, Dirleton, North Berwick – declared for Ammonia – located approximately 8.95km north of the scheme extents
- Top & Park Unit, Ruchlaw Mains Farm, Dunbar – declared for Ammonia, and Methane – located approximately 4.85km east-southeast of the scheme extents.

Baseline air quality within the scheme extents is likely to be primarily influenced by traffic along the A1 carriageway. Secondary sources are most commonly derived from motor vehicles travelling along local network roads and day-to-day agricultural land management activities

Cultural heritage

The PastMap and Historic Environment Scotland (HES) online mapping tools identifies that there are fifteen undesignated cultural heritage (UCHAs) within 300m of the scheme extents. Ten of these are Canmore sites, and five are Historic Environment Record Sites. One of the sites, "Pencraig Hill" Canmore site (ID: 249181), lies within the scheme extents.

There is one scheduled monument within 300m of the scheme extents. The "Overhailes, enclosure 600m WSW of" lies approximately 100m south of the scheme extents.

There is one listed building within 300m of the scheme extents. “Overhailes Farmhouse” is a Category B listed building which lies approximately 295m east-southeast of the scheme extents.

There are no other designated or undesignated features of cultural heritage within 300m of the scheme extents.

Construction of the A1 is likely to have removed any archaeological remains that may have been present within the trunk road boundary. The potential for the presence of unknown archaeological remains in the study area has therefore been assessed to be low.

Given the restriction of the works to the A68 carriageway, and no requirement for excavation, any existing cultural heritage assets are unlikely to be affected by the proposed works. Further, the construction of the A68 carriageway is likely to have removed any undiscovered archaeological evidence which lay within the trunk road boundary. As such cultural heritage has been scoped out of further environmental assessment

Landscape and visual effects

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

The Landscape Character Type (LCT) within the scheme extents is categorised as “Lowland Farmed Plain – Lothians” (LCT – 275) (Landscape Character Type Map). It is characterised by:

- Smoothly rolling, large-scale arable plain landforms with occasional igneous intrusions forming local landmarks.
- Small streams forming shallow breaks in the smooth slopes, feeding into the broad meandering valley of the River Tyne.
- High quality agricultural land, divided into a chequerboard pattern of fields with historic field pattern being retained in some areas. Field boundaries defined by clipped hedges, scattered hedgerow trees, post and wire fences and occasional stone walls.
- Occasional small-scale woodlands and shelterbelts relate to watercourses and reinforce field pattern.
- Policy woodlands, estate houses and, buildings and boundary walls of several estates throughout the area create a historic character.
- Numerous conservation villages spread throughout the Landscape Character Type with a scattering of farmsteads and small housing clusters, as well as larger settlement of Haddington.

- Open views across the landscape to Edinburgh, the coast to the north, and hills to the south.

The Historic Land-use Assessment (HLA) classifies the land-use surrounding the scheme as “Motorways and Major Roads” in the immediate vicinity of the scheme, with the wider land use classified as the following:

- Planned Rectilinear Farms and Fields
- Rectilinear Fields and Farms
- Designed Landscape
- Recreation Area
- Managed Woodland

The national scale land capability for agriculture classifies land surrounding the scheme as having an agricultural class of 2 throughout most of the scheme extents, with a small section of the scheme extents having a class of 3.2 at the easternmost end. A class of 2 indicates land capable of producing a wide range of crops, while a class of 3.2 indicates land which is capable of average production through high yields of barley, oats, and grass, where grass leys are common.

There are five areas of ancient woodland within 300m of the scheme extents (Ancient Woodland Inventory),. These five areas have a total area of 27.16ha, with an antiquity of 2b, indicating woodland of plantation origin which has been continuously wooded since at least 1860. Three of the areas of ancient woodland span the scheme extents.

There are nine areas of native woodland within 300m of the scheme extents (Native Woodland Survey). Eight of the areas have the dominant habitat of “Lowland mixed deciduous woodland” which total 15.04ha in area and have a range of maturities including regenerating, young, mixed, and mature. The other area of native woodland has the dominant habitat of “Wet woodland” and is 0.85ha in area, with a maturity of young.

There is one area of nearly native woodland within 300m of the scheme extents. This area has the dominant habitat of “Lowland mixed deciduous woodland” with a total area of 0.51ha and a maturity of mixed.

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

There are no European Sites designated for nature conservation i.e. Special Protection Areas (SPA), Special Areas of Conservation (SAC), or Ramsar Sites, located within 2km of, or which share connectivity with the scheme extents.

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

The NBN atlas holds records of numerous bird species within 2km over a ten-year period. Under the Wildlife and Countryside Act 1981 (as amended) (WCA), all wild birds and their active nests are protected.

The NBN atlas holds the following records of invasive and injurious plants (as listed in the Network Management Contract):

- Broad-leaved dock (*Rumex obtusifolius*)
- Common ragwort (*Jacobaea vulgaris)*
- Creeping thistle (*Cirsium arvense*)
- Curled dock (*Rumex crispus*)
- Himalayan balsam (*Impatiens glandulifera*)
- Japanese knotweed (*Raynoutria japonica*)
- Rosebay willowherb (*Chamaenerion angustifolium*)
- Spear thistle (*Cirsium vulgare*)

The closest record to the scheme extents relates to that of Japanese knotweed, which is located approximately 460m south of the scheme extents.

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

The habitat immediately bordering the A1 within the scheme extents consists primarily of pastoral fields, managed hedgerows, and some broadleaved trees. While there is some availability of roadside vegetation, habitat immediately bordering the A1 carriageway within the scheme extents, it is assessed to be of reduced ecological value, due to the high likelihood of disturbances from moderate volume, fast-flowing traffic and that the A1 carriageway limits the connectivity and continuity for species between their potential habitats on either side of the road.

A Preliminary Roost Assessment (PRA) was carried out by BEAR Scotland in November 2024 on the three underpasses which are within the scheme extents. It

identified negligible bat potential at all three underpasses, with no clear potential roosting features. The underpasses are all relatively smooth, precast concrete with only very small or superficial cracks, with automatic lights which turn on every night, further reducing the likelihood of roosting bats. Combining the lack of suitable features, with the lighting, and the likelihood of suitable features in the surrounding area (i.e., old farm buildings, large trees etc.) and their assessed negligible bat roosting potential, no further bat work is required to facilitate works.

Identified on the northeastern side of the pathway at Sandy's Mill underpass (the westernmost underpass) was a large stand of the native, but invasive, marestail (*Equisetum sp.*).

Geology and soils

There are no geological SSSIs or Geological Conservation Review Sites within 300m of the scheme extents (SiteLink). Additionally, there are no Local Geodiversity Sites (LGS) with connectivity to the scheme extents.

The generalised and major soil groups in the scheme extents are classified as "Brown earths" in the eastern and western parts, and noncalcareous gleys in the middle of the scheme extents. (Scotlands's Soils). The Carbon and Peatland 2016 map shows soils in the scheme area have a carbon and peatland class of 0, indicating mineral soils in which peatland habitats are not typically found (Scotland's Soils).

Bedrock in the scheme extents is classified as "Pencraig Sill - Trachyte" in the eastern part of the scheme, and "Garleton Hills Volcanic Formation" throughout the rest of the scheme. There are superficial deposits of Devensian diamicton till (British Geology Viewer).

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

Given the restriction of the works to the A68 carriageway boundary, and the lack of any excavation works, local geology and soils are unlikely to be affected by the proposed works. Therefore, geology and soils has been scoped out of further environmental assessment.

Material assets and waste

The proposed works are required due to deterioration of the carriageway surface. Materials used will consist of:

- TS2010,
- AC20 dense binder,
- Bitumen emulsion,
- Hot bitumen,
- Cold bitumen sealant,
- Thermoplastic road markings, and
- Milled-in 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 2.8km scheme involves removal of the surface course and localised areas of base and binder course. In total, approximately 2,529.3 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

There are commercial and residential properties within 300m of the scheme extents. For further details see “Population and Human Health”.

The works do not fall within a candidate noise management area (CNMA) as defined by the Transportation Noise Action Plan (TNAP).

The night-time noise levels (Lnight) modelled within the scheme extents ranges between 60 and 70db with noise levels dropping to between 50 and 60db at the nearest sensitive receptor (residential) (Noise Map Viewer).

Baseline noise and vibration in the study area is mainly influenced by vehicles traveling along the A1 carriageway. Secondary sources are derived from vehicles travelling along nearby local network roads.

Population and human health

There are twenty-nine residential properties, two farmstead properties, and one commercial property within 300m of the scheme extents. The closest property is located approximately 60m north of the scheme extents and is a residential property. The residential properties are well screened from the scheme extents by a dense treeline within the northern verge of the A1 carriageway. The farmstead and commercial properties are also well screened from the scheme extents by roadside vegetation.

The scheme extents pass over two roads and a footpath. One of the roads connects the A199 to a local farm road. The footpath also connects to this farm road. The other road connects the A199 to the farmstead and commercial properties mentioned previously.

There is one emergency layby within the scheme extents. It is located towards the eastern end of the scheme extents.

There are no core paths within 300m of the scheme extents (Core Paths Map).

The scheme extents are located within the A1 dual carriageway which has a speed limit of 70mph throughout. The Annual Average Daily Traffic (AADT) flow is high (15,212 motor vehicles (ID: 80904, 2023 data)) (Road Traffic Statistics).

Road drainage and the water environment

There are no SEPA classified waterbodies within 300m of the scheme extents (SEPA).

There are five unclassified waterbodies within 300m of the scheme extents. These waterways are drainage ditches from the surrounding farmland, the closest of which lies approximately 45m north of the scheme extents. These waterbodies are too small (in terms of catchment area) to be classified as a main stem waterbody by SEPA under the WFD.

There is one unclassified pond within 300m of the scheme extents. It is located approximately 80m south of the scheme extents and shares no connectivity with the scheme extents.

A search of the SEPA Flood Map online mapping tool shows that there are four areas of increased flood risk within the scheme extents. These areas range between a 0.1% chance of flooding each year, and a 10% chance of flooding each year.

The scheme extents lie within the Haddington groundwater basin (ID: 150592). It was rated as having a “Good” overall status by SEPA in 2022. It is a Drinking Water Protected Area (DWPA) (SEPA).

A search of the Scotland's Environment (SE) determined that the trunk road, within the scheme extents, lies within the Lothian and Borders 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

There will be a short-term impact on the landscape character and visual amenity of the site as a result of the presence of construction plant, vehicles, and TM. However, people, ancillary plant, vehicles, NRMM and materials are restricted to areas of made/engineered ground on the A1, and construction works are programmed to be undertaken at night (eight 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 will be lightly cultivated or graded (upon completion of the works) to allow natural recolonization by local species and promote integration with existing landscape character.

Biodiversity

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 A1, furthermore, the scheme is of short duration (eight 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.

A stand of the native, but invasive, marestail (*Equisetum sp.*) was identified at the Sandy's Mill underpass (the westernmost underpass). Works will however be entirely restricted to the A1 SB carriageway above, and so works will not impact or cause the spread of this 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.

Biodiversity mitigation measures:

- 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., surrounding fields, hedgerows along A1 etc.) to ensure minimal impact on nocturnal species.
- If the works are delayed to within the nesting bird season, the design engineer will inform the SE Environment team of the delay to allow for pre-works nesting birds checks.
- 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 to move away from the disturbance.
- All equipment stored onsite, if necessary, will be checked at the start of each workday to ensure mammal species are not 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.

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

- The quantity and type of waste that will be produced.

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

Considering the nature, 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:

- A SWMP will be completed by the Designer and Contractor as required.
- Good materials management methods (e.g., 'just-in-time' delivery) will be implemented wherever possible.
- 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/2008124), 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 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 is located approximately 60m north of the scheme extents.

However, the works are not located within a CNMA or CQA, and works will also be completed over eight 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.
- 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 eight nights (when traffic flows will be at a minimum), as such no congestion issues are predicted 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:

- 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.

- Advanced signage will be strategically placed on the trunk road to notify stakeholders of the road closure and diversion, as well as the closure of the emergency layby where necessary.
- A Traffic Management Plan (TMP), which includes measures to avoid or reduce disruption to road traffic, will be produced in accordance with the Traffic Signs Manual (Department of Transport 2009). The TMP will ensure that there is no severance of community assets, access routes or residential development.

Road drainage and the water environment

During 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.

Considering the relatively minor nature of the resurfacing works, the short duration, lack of connectivity with any surrounding waterbodies (i.e. >45m from any surrounding surface waterbodies), 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:

- 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 will not be 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 A1 within the scheme extents upon completion of the works.

Works are restricted to areas of made ground on the A1 carriageway surface, with access to the scheme gained via the A1 mainline. TM will employ a full road closure with 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 East Lothian Council Planning Portal has identified three planning applications within 300m of the scheme extents within the last two years:

Reference	Details	Distance from the scheme extents
24/00870/P	Extensions to house, erection of garage, bin store, walls, fencing, pillars and gates	130m north of the scheme extents

24/00943/CLU	Certificate of lawfulness for an existing use - As a house and alterations	155m north of the scheme extents
23/00125/P	Erection of conservatory and formation of decking	210m north of the scheme extents

Application 23/00125/P has been withdrawn so it has no potential for cumulative effects. Application 24/00943/CLU is a certificate of lawfulness for an existing use of a building, and as such it has no potential for cumulative effects. 24/00870/P refers to relatively minor works which bear no connectivity to the scheme extents and as such it has no potential for cumulative effects.

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 A1 trunk road or surrounding roads in proximity to the scheme which will be undertaken at the same time.

Assessments of the environmental effects

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

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

This is a relevant project in terms of section 55A(16) of the Roads (Scotland) Act 1984 as it is a project for the improvement of a road and the completed works (together with any area occupied by apparatus, equipment, machinery, materials, plant, spoil heaps, or other such facilities or stores required during the period of construction) 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 A1 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 A1 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 does not lie within 2km of a European Site designated for nature conservation.
- The scheme does not lie within any sites of historical, cultural, or archaeological significance.
- The scheme is not located within any areas designated for landscape interests.
- Land use will not change as a result of the works.
- The works do not require any private land acquisition.
- The scheme 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 eight nights to complete on a rolling programme, 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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