



**TRANSPORT  
SCOTLAND**  
CÒMHDHAIL ALBA

# **Environmental Impact Assessment Record of Determination**

## **A720 Baberton to Bonaly**

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## Project Details

### Description

BEAR Scotland has been commissioned by Transport Scotland to carry out resurfacing works on the A720 eastbound (EB) carriageway. The works will consist of carriageway resurfacing to a maximum depth of 200mm inlay and reinstatement of road markings for a length of approx. 1.2km (approximately 1.49ha) on the A720 EB carriageway.

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 Chapter 5 of the Traffic Signs Manual), and
- Remove TM and open road.

The works are currently programmed to commence on the 8<sup>th</sup> of January 2025. Works are programmed to be completed over eight nights, excluding weekends (20:30 – 06:00). Traffic management (TM) is currently anticipated to comprise of eight night-time road closures along the A720 EB carriageway with a signed diversion in place. Traffic will be diverted off the A720 EB carriageway at Hermiston Junction and follow Calder Road, Westerhailes Road, the B710, and Redford Road, before rejoining the A720 EB carriageway again at Dreghorn Junction via the Dreghorn Link.

## Location

The scheme lies on the A720 eastbound (EB) carriageway, approx. 2.5km southeast of Hermiston and is primarily surrounded by residential areas with agricultural land found to the south west (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

A search of the [Air Quality in Scotland](#) online mapping tool records that air quality zones in the wider area record bandings in the 'green zone' (Low Index 1-3).

The scheme is located within the City of Edinburgh Council boundary area, which currently has five Air Quality Management Areas (AQMAs) and one revoked AQMA within its administrative boundary. The closest AQMA, 'Edinburgh City Centre', is located approx. 2.6km northeast of the scheme extents (at its nearest point) and is declared for nitrogen dioxide (NO<sub>2</sub>).

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

- 'Balerno Poultry Farm, Lanark Road West, Balerno' – Intensive livestock production and aquaculture, declared for ammonia (NH<sub>3</sub>) (located approx. 7.8km southwest of the scheme),
- 'Gogarbank Poultry, Corstorphine, Edinburgh' – Intensive livestock production and aquaculture, declared for ammonia (NH<sub>3</sub>) and particulate matter (PM<sub>10</sub>) (located approx. 3.4km northwest of the scheme),
- 'Hillwood Quarry, Ratho, Midlothian' – Mineral industry, declared for carbon dioxide (CO<sub>2</sub>) and particulate matter (PM<sub>10</sub>) (located approx. 8km northwest of the scheme),
- 'Kaimes Quarry Landfill Site, Kirknewton' – Waste and waste-water management, declared for methane (CH<sub>4</sub>) (located approx. 8.3km southwest of the scheme),
- 'MacFarlan Smith Ltd, Wheatfield Road, Edinburgh' – Chemical industry, declared for chloroform (CHCl<sub>3</sub>), non-methane volatile organic compounds (NMVOCs), and toluene (C<sub>6</sub>H<sub>5</sub>CH<sub>3</sub>) (located approx. 4.2km northeast of the scheme),
- 'North British Dist, Wheatfield Road, Edinburgh' – Animal and vegetable products from the food and beverage sector, declared for carbon dioxide (CO<sub>2</sub>), hydrochlorofluorocarbons (HCFCs), hydrofluorocarbons (HFCs), and non-methane volatile organic compounds (located approx. 4.3km northeast of the scheme),
- 'Oatslie Sandpit L/F, Cleugh Road, Midlothian' – Waste and waste-water management, declared for carbon dioxide (CO<sub>2</sub>), chlorofluorocarbons, hydrochlorofluorocarbons (HCFCs), and methane (CH<sub>4</sub>) (located approx. 7.8km southeast of the scheme),
- 'Ravelrig Quarry, Kirknewton, Midlothian' – Mineral industry, declared for particulate matter (PM<sub>10</sub>) and particulates (PM<sub>2.5</sub>) (located approx. 6.3km west of the scheme),
- Clifton Poultry Farm, Clifton Road, Newbridge – Intensive livestock production and aquaculture, declared for ammonia (t) (located approx. 9.1km northwest of the scheme),
- Dalmeny Hound Point, South Queensferry – Energy section, declared for hydrochlorofluorocarbons (HCFCs), methane (CH<sub>4</sub>) and non-methane volatile organic compounds (NMVOCs), and
- 'Sighthill Biscuit Factory, Edinburgh' – Animal and vegetable products from the food and beverage sector, declared for hydrofluorocarbons (located approx. 1.7km north of the scheme).

The baseline air quality within the scheme extents is primarily influenced by motor vehicles travelling along the A720 trunk road. Secondary sources are derived from vehicles travelling along nearby local network roads and day-to-day agricultural land management activities.

## Cultural heritage

According to the [Past Map](#) and [Historic Environment Scotland](#) (HES) online mapping tool, there are nine listed buildings located within 300m of the scheme extents. The nearest record pertains to 'Lanark Road, 476 Juniper Green Manse' (ID: LB29206), which is located approx. 30m west of the EB carriageway boundary at the western end of the scheme extents and does not share connectivity with the scheme (i.e., lies >15m from scheme extents).

There are two conservation areas located within 300m of the scheme extents:

- 'Colinton' conservation area, located directly alongside the EB carriageway boundary at the western end of the scheme extents, and
- 'Juniper Green' conservation area, located approx. 10m west of the EB carriageway boundary at the western end of the scheme.

No other designated cultural heritage assets are located within 300m of the scheme extents.

Of lesser cultural heritage value, approx. 42 undesignated cultural heritage assets (UCHAs) lie within 300m of the scheme extents. The closest record, 'Edinburgh, Curriemuirend' Historic Environment Record (HER) (ID: MED11690) and Canmore site (ID: 144865), lies on the westbound carriageway approx. 5m west of the EB carriageway boundary, therefore sharing connectivity with the scheme. The remaining UCHAs do not share connectivity with the scheme extents.

Construction of the A720 carriageway is likely to have removed any archaeological remains that may have been present within the carriageway boundary. The potential for the presence of unknown archaeological remains in the study area has therefore been assessed to be low.

## Landscape and visual effects

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

The Landscape Character Type (LCT) within the scheme extents is 'Urban', of which there are no key characteristics listed ([Scottish Landscape Character Types](#)).

[Land use](#) within the study area is comprised of the following:

- Motorway and major roads,
- Plantation,

- Recreation area,
- Rectilinear farms and fields,
- Rough grazing,
- Urban area, and
- Managed woodland.

The [national scale land capability for agriculture](#) classifies land surrounding the scheme as being:

- 'Class 2' - Land capable of producing a wide range of crops, and
- 'Urban'.

There are five areas of woodland registered on the [Native Woodland Survey of Scotland](#) database located within 300m of the scheme extents:

- Approx. 7.75ha of lowland mixed deciduous woodland, located directly alongside the EB carriageway boundary at the western end of the scheme extents,
- Approx. 1.19ha of lowland mixed deciduous woodland, located directly alongside the EB carriageway boundary at the western end of the scheme extents,
- Approx. 0.82ha of hawthorn scrub located approx. 25m east of the EB carriageway boundary
- Approx. 0.51ha of hawthorn scrub, located approx. 30m east of the EB carriageway boundary, and
- Approx. 2.04ha of lowland mixed deciduous woodland, located approx. 55m east of the EB carriageway.

In addition to the above, there is approx. 1.02ha of broadleaved woodland located directly alongside the EB carriageway boundary and approx. 1.28ha of broadleaved woodland located approx. 10m west of the EB carriageway boundary.

There are no areas of woodland registered on the [Ancient Woodland Inventory Scotland](#) database located within 300m of the scheme extents and there are no trees covered by a Tree Preservation Order (TPO) with connectivity to the scheme, however all trees within conservation areas bordering the scheme are protected..

The existing trunk road is a prominent linear landscape feature. The trunk road corridor, for example, has a distinct character shaped by high-volume, 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 the scheme is not situated within 2km of, and does not share connectivity with, European Sites designated for biodiversity features e.g. Special Areas of Conservation (SAC), Special Protection Areas (SPA), or Ramsar sites.

One Local Biodiversity Site (LBS) designated for biodiversity features has been identified within 300m of the scheme extents:

- Water of Leith – Spylaw Park to Juniper Green is located directly alongside the EB carriageway boundary at the western end of the scheme extents.

There are no Sites of Special Scientific Interest (SSSI) or Local Nature Reserves (LNRs) designated for biodiversity features located within 300m of the scheme extents.

A search of the NBN online mapping tool records the following invasive and injurious plant species as listed within the Network Management Contract within 2km of the scheme extents (in the last 10-years):

Four invasive non-native species (INNS):

- Japanese knotweed (*Reynoutria japonica*),
- Himalayan balsam (*Impatiens glandulifera*), and
- Giant hogweed (*Heracleum mantegazzianum*).

Five injurious weeds (as listed in under The Weeds Act 1959):

- Broadleaved dock (*Rumex obtusifolius*),
- Common ragwort (*Jacobaea vulgaris*),
- Creeping thistle (*Cirsium arvense*),
- Curled dock (*Rumex crispus*), and
- Spear thistle (*Cirsium vulgare*).

One invasive native perennial (as listed in the Trunk Road Inventory Manual):

- Rosebay willowherb (*Chamaenerion angustifolium*).

The closest record pertains to Himalayan balsam, which is located approx. 0.29km east of the scheme (recorded in 2022).



A search of the Asset Management Performance System (AMPS) online mapping tool records the following plant species along the verges of the EB carriageway boundary within the scheme extents (in the last 10-years):

One injurious weed:

- Common ragwort (located at the eastern end of the scheme extents).

No INNS or invasive native perennials were recorded within the verges of the EB carriageway boundary.

The habitat immediately bordering the A720 EB carriageway consists primarily of narrow strips of managed verge alongside areas of broadleaved woodland with the Water of Leith also being spanned by the A720 within the scheme extents. Outwith this the scheme is bordered by urban areas to the north and east with arable land bordering the A720 to the south west. While there is a high availability of roadside vegetation, the habitat immediately bordering the motorway may be of reduced ecological value, due to the likelihood of disturbances from high-volume, fast-flowing traffic. The presence of the A720 also limits the connectivity and continuity for species between their potential habitats on either side of the carriageway.

## Geology and soils

One [Local Geodiversity Sites](#) (LGS) shares connectivity with the scheme extents:

- Water of Leith: Craiglockhart and Colinton Dells, which the EB carriageway crosses over at the western end of the scheme extents.

The A720 within the scheme extents is not located within a [Geological Conservation Review Site](#) (GCRS).

The [National Soil Map of Scotland](#) online mapping tool records one generalised soil type within the scheme extents:

- Brown soils.

One major soil group is recorded within the scheme extents:

- Brown soils.

The [British Geological Survey](#) online mapping tool records the superficial geology within the scheme extents as:

- Till, Devensian – Diamicton.

The bedrock geology within the scheme extents is recorded as:

- Kinnesswood Formation – Sandstone,
- Ballagan Formation – Sandstone, and
- Gullane Formation – Sedimentary Rock Cycles, Strathclyde Group Type.

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

While a local geodiversity site is located within the scheme extents, the A720 at this location is elevated above the Water of Leith and as such there is no potential for impacting the geology or soils within the geodiversity site. Therefore, this factor is assessed to have no constraints that are likely to be impacted by the proposed works and has been scoped out of further environmental assessment.

## Material assets and waste

The proposed works are required to resurface the worn EB carriageway and reinstate road markings. Materials used will consist of:

- TS2010 Class 1 10mm Surface Course,
- AC20 Dense Binder,
- EME2 14mm Binder Course,
- Tack/Bond Coat,
- Paving Grade Bitumen,
- Weatherline+ Thermoplastic Extrusion Road Markings, and
- Embedded & Surface Mounted Road Studs.

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

The approx. 1.2km scheme involves removal of the surface course and localised areas of base and binder course. In total, approx. 3,053 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

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

The night-time modelled noise level ([LGNT](#)) within the scheme extents ranges between 70 and 75 decibels, with levels dropping to between 65 and 70 decibels at the nearest noise sensitive receptor (NSR) (residential property).

Baseline noise and vibration in the study area is mainly influenced by vehicles traveling along the A720 trunk road. Secondary sources are derived from vehicles travelling along nearby local network roads, day-to-day woodland and agricultural land management activities.

## Population and human health

Numerous residential properties and several business premises are located within 300m of the scheme extents. The nearest residential property is located approx. 25m east of the EB carriageway boundary and has partial screening from the scheme due to an intervening tree/shrub shelterbelt and the adjacent sloped embankment. All other properties have partial to full screening from the scheme extents due to intervening topography, dense/fragmented tree/shrub shelterbelts, and/or other residential properties.

There are no non-motorised (NMU) or community facilities with connectivity to the scheme extents and there is no street lighting present throughout the scheme.

The A720, within the scheme extents, is a dual carriageway with a speed limit of 70 mph applying throughout. The Annual Average Daily Traffic (AADT) flow is high (74,896 motor vehicles (ID: 80601, 2023 data)) ([Road Traffic Statistics](#)) and is comprised of:

- 448 two wheeled motor vehicles,
- 54,168 cars and taxis,
- 128 bus and coaches,
- 16,245 Light Goods Vehicles (LGVs), and
- 3,907 Heavy Goods Vehicles (HGVs)

There are no congestion issues noted on the A720 EB carriageway within the scheme extents during the proposed working hours.

## Road drainage and the water environment

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

- 'Water of Leith' (Poet's Burn to Murray Burn confluences) (ID: 3702), which flows beneath the EB carriageway at the western end of the scheme extents. It is a river in the Water of Leith catchment of the Scotland river basin district, with the main stem approx. 6.8km in length, and has been classified as 'Poor'.

Three unclassified waterbodies lie within 300m of the scheme extents:

- 'Pond one', located approx. 85m west of the EB carriageway boundary at the western end of the scheme extents,
- 'Pond two', located approx. 220m south of the EB carriageway boundary, and
- 'Drain one', located approx. 240m south of the EB carriageway boundary.

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

A search of the [SEPA's Flood Map](#) online mapping tool records that the A720 EB carriageway within the scheme extents has a medium risk of surface water flooding (i.e., this area has a 0.5% chance of flooding each year) at the eastern end of the scheme.

A search of the [Scotland's Environment](#) (SE) online mapping tool determined that the trunk road, within the scheme extents, lies on the 'Edinburgh' groundwater, which has been classified as 'Good'.

The scheme extents do not lie within a Nitrate Vulnerable Zone ([NVZ](#)).

## Climate

The Climate Change (Scotland) Act 2009 sets out the target and vision set by the Scottish Government for tackling and responding to climate change ([Climate Change \(Scotland\) Act 2009](#)). The Act includes a target of reducing CO<sub>2</sub> 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:

- Careful consideration will be given to the siting and orientation of ancillary plant, vehicles, and NRMM, so that it is located, as far as is possible, away from receptors. Activities which have the potential to produce air pollution (e.g., cutting and grinding of materials) will also, if possible, be undertaken away from any nearby properties.
- 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.
- All 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.

## Cultural Heritage

The 'Colinton' conservation area is located directly alongside the EB carriageway boundary and the 'Juniper Green' conservation area is located approx. 10m west of the EB carriageway boundary. However, all works are restricted to resurfacing of the existing A720 EB carriageway and no people, ancillary plant, vehicles, NRMM, or materials will be permitted within the boundary of either conservation area. As such, providing mitigation is adhered to there is no potential for impacts to the adjacent conservation areas.

Construction of the A720 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 has therefore been assessed to be low. Moreover, the works do not entail any vegetation clearance or earthworks, and people, ancillary plant, vehicles, NRMM, and materials are restricted to the existing A720 EB made/engineered carriageway. As such, there is low risk of disturbing or damaging previously undiscovered or unrecorded items of cultural interest.

Considering the nature, duration, size, and scale of the scheme, and with implementation of mitigation detailed below, impacts on cultural heritage are assessed as temporary, negligible adverse in magnitude.

Upon completion of the works, no residual impacts on cultural heritage are anticipated.

Cultural Heritage mitigation measures:

- Site operatives will be made aware of the proximity and sensitivity of the 'Colinton' and 'Juniper Green' Conservation Areas.
- People, ancillary plant, vehicles, NRMM, and materials will be restricted to areas of made/engineered ground (as much as reasonably practicable). Where access out with the made/engineered ground is required for the safe and effective completion of the scheme, the area will be reduced as much as is reasonably practicable, and ideally will be accessed on foot.
- If a change to the construction programme on site is required that necessitates earthworks or vegetation clearance, BEAR Scotland's Environment Team will be contacted.



## Landscape and visual effects

During construction, there will be a short-term impact on the landscape character and visual amenity of the site as a result of the presence of construction plant, vehicles, and TM. However, people, ancillary plant, vehicles, NRMM and materials will be restricted to areas of made/engineered ground on the A720 EB carriageway. Construction works are programmed to be undertaken at night and as such visual impacts are likely as a result of temporary site lighting.

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, such as those within the adjacent Water of Leith – Spylaw Park to Juniper Green LBS, if present in the vicinity during the works. The works will, for example, require a range of ancillary plant, vehicles and NRMM which will emit noise and create potential disturbance. The works will also require delivery of materials and the presence of personnel to facilitate the improvements to the road surface. However, the number of construction vehicles and construction operatives required onsite is low given the scale and scope of works. In addition, any species in the area are likely to be accustomed to noise and visual disturbance pertaining to vehicle movements on the A720, furthermore, the scheme is of short duration (eight nights, excluding weekends). The potential for significant species disturbance within the area of likely construction disturbance is therefore somewhat diminished.

Given that the LBS is located directly adjacent to the EB carriageway within the scheme extents, unmitigated there is also a risk of run-off entering the designated site. However, with best practice pollution prevention measures as detailed in the

Road Drainage and Water Environment section being implemented the risk of this is considered extremely low.

Common ragwort, an injurious weed, has been identified along the EB carriageway verge at the eastern end of the scheme extents. However, all works will be restricted to the existing A720 EB carriageway boundary and as such will have limited potential to impact upon these species, nevertheless precautionary mitigation detailed below will further reduce this risk.

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:

- Site operatives will be made aware of the proximity and sensitivity of the 'Water of Leith – Spylaw Park to Juniper Green' LBS.
- Where possible, 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., shelterbelt vegetation, LBS and Water of Leith etc.) to ensure minimal impact on nocturnal species.
- Common ragwort has been recorded within the EB verge of the scheme extents. Toolbox Talk TTN-009 'Working with Injurious Weeds & Invasive Plants' will therefore be briefed prior to works commencing. Site personnel will remain vigilant for the presence of any potentially unrecorded instances of invasive or injurious weeds in road verges throughout the works period.
- The works are not permitted to disturb or destroy any active birds nests. If an active birds nest is identified onsite that will be impacted by works, the Environmental Team will be contacted.
- All site workers will have received adequate training relevant to their role prior to working on the site, including specific environmental inductions and 'toolbox talks' as required.
- Site personnel will remain vigilant for protected species and will not approach or touch any animals seen on site. Any sightings of protected species will be reported to BEAR's Environmental Team. Should a protected species be encountered or move within 50m of the active works (including compounds), works will be temporarily halted until the animal(s) move at least 50m away from the construction site, or until BEAR's Environmental Team can provide advice.
- The Contractor will employ 'soft start' techniques for all noisy activity to avoid sudden and unexpected disturbance during works. Each time the activity is started up after a period of inactivity, the noise levels will be gradually increased over a period of 30 minutes to permit animals (including birds) to move away from the disturbance.

- All equipment stored onsite, if necessary, will be checked at the start of each 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 with the SWMP 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/2010358), 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.
- If any substance used on site displays the 'Dangerous to the Environment' COSHH symbol, then the following controls will be implemented:
  - Substance will not be allowed to enter road drainage, sewers, or groundwater.
  - Any spillages will be contained.
  - Any spillages will be absorbed with an absorbent material (e.g., dry sand or earth) and collected and stored in a suitable container which is properly labelled and sealed securely in preparation for disposal as special waste.
  - Spillages or uncontrolled discharges will be immediately reported to SEPA, as appropriate.
  - Substance will be clearly labelled and stored in bunded areas away from surface watercourses.

## Noise and vibration

Activities undertaken on site could potentially have some localised and short-term noise impacts in proximity to the works. The road works will, for example, require a range of ancillary plant, vehicles and NRMM for cold milling in preparation for carriageway resurfacing. Noise will also be generated by using breakers (jackhammers), chipping hammers, use of rollers, etc. As a result, there is potential for noise and vibration effects to residential properties within the local area, the closest of which lies approx. 25m east of the scheme.

However, the works are not located within a CNMA or CQA, and works will also be completed over eight nights excluding weekends, with the aim being to complete the noisiest works by 23:00. In addition, the proximity of road space suggests that nearby 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 A720 trunk road should decrease post construction.

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

Noise and vibration mitigation measures:

- The local authority environmental health department will be notified of nighttime working by BEAR Scotland's design engineer.
- Where possible, the noisiest work operations (e.g., cold milling, using breakers (jackhammers), chipping hammers, use of rollers, etc.) will be completed before 23:00.
- Wherever possible, careful consideration will be given to the siting and orientation of particularly noisy items of NRMM so that it is located away from surrounding properties. Activities which have the potential to produce excessive noise will be undertaken away from surrounding properties, if possible.
- If unacceptable noise is emanating from the site the operation will, where possible, be modified and re-checked to verify that the corrective action has been effective. Actions to be considered include (a) minimizing cutting and grinding on-site, (b) reducing the operating hours, (c) repositioning equipment, (d) changing the method of working etc. Corrective actions will be actioned through the non-conformance reporting procedure, which ensures a root-cause analysis is carried out on each incident. The non-conformance procedure also ensures that appropriate corrective and preventative action measures are agreed and implemented in a timely fashion with all parties, and are recorded and actioned through to closeout, and fully auditable and traceable.
- Ancillary plant, vehicles and NRMM with directional noise characteristics will (where practical) be shut down in intervening periods between site operations.
- The use of paving breakers (jackhammers), chipping hammers, etc. will be avoided (except where there is an overriding justification), and if used will be fitted with mufflers or silencers of the type recommended by the manufacturer.
- Drop heights from vehicles and NRMM will be kept to a minimum to minimise noise when unloading.
- All ancillary plant, vehicles and NRMM used onsite will have been regularly maintained, paying attention to the integrity of silencers and acoustic enclosures.
- All compressors will be 'sound-reduced' models fitted with properly lined and sealed acoustic covers which will be kept closed when in use.
- HGV, site vehicles and NRMM will be switched to the minimum setting required by HSE and, where possible, will utilise 'broadband non-tonal' or 'directional sound reversing' alarms. Speed limits will also be reduced through the works.

## Population and human health

During construction, activities undertaken on site have the potential to have temporary adverse impacts on local residents and road users. However, there are no NMUs or community facilities with connectivity to the scheme extents and the works will be undertaken at night when usage of the A720 EB carriageway is expected to be lower. TM will only be in place for eight nights excluding weekends (when traffic flows will be at a minimum), as such, no congestion issues are noted during the proposed construction hours.



As noted above, numerous residential properties lie within 300m of the scheme extents, the nearest of which is located approx. 25m east of the scheme. As such there is potential for impacts to local residents in the form of noise / vibration impacts, visual disturbance and delays due to traffic management. However, providing mitigation measures detailed below, and those listed within the noise and vibration section, are adhered to the impacts are assessed to be somewhat reduced.

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.
- Advanced signage will be strategically placed on the trunk road to notify stakeholders of the road closure and diversion. Signage will be installed at least seven days in advance of the road closure.
- Given the proximity of residential properties, Toolbox Talk TTN-042 'Being a Good Neighbour' will be briefed to all staff prior to the commencement of works.
- 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 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.
- 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 'Water of Leith' classified waterbody which flows beneath the scheme extents.

However, a solid parapet is present along the bridge deck separating the A720 from the Water of Leith and given the restriction of the works to the existing A720 EB carriageway boundary, there is limited potential for direct impacts. Furthermore, the potential for an indirect pollution incident to a waterbody is also unlikely e.g.,



experience gained from BEAR maintenance schemes elsewhere on the network has shown that where standard best working practice is adopted (e.g., adherence to SEPA GPPs, 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 proximity and sensitivity of the 'Water of Leith' classified waterbody.
- No work has been identified that would require entering a waterbody. If such a need were identified onsite, 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.
- The Contractor will implement measures to minimise the risk of sediment or accidental spillages entering the road drainage system e.g., prior to works commencing any roadside gullies within 10m of work activities will be bunded (e.g., utilisation of drain covers or similar) to ensure full segregation of the works from the road drainage system. The Contractor will inspect bunds periodically to ensure that they have not been removed, damaged, or interfered with and they will be cleaned of silt and debris as necessary. If it is identified that bunds are not up to standard, the works will not commence until they have been reinstated to the condition, they were originally in.
- 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 any waterbodies, 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.

- 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 should be visually checked to ensure they have not become blocked as a result of the scheme.
- 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 A720 EB carriageway within the scheme extents upon completion of the works.

Works are restricted to areas of made ground on the A720 EB carriageway surface, with access to the scheme gained via the A720 mainline. TM will employ a full A720 EB carriageway road closure between Hermiston Junction and Dreghorn Junction with signed diversion and there are no NMU or community assets with connectivity to the scheme extents. As such, the proposed work 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.

In addition, a search using [Edinburgh Council 'Simple Search'](#) identified six planning applications within 300m of the scheme extents:

Reference	Description	Status	Distance from works
24/05597/FUL	Proposed storey and a half rear and single storey gable extension with internal alterations.	Awaiting assessment	Approx. 60m east of the scheme extents
24/04988/FUL	Single storey flat roof extension to rear with associated internal alterations and landscaping externally.	Awaiting assessment	Approx. 115m east of the scheme extents
24/02432/FUL	Railing addition to front garden wall. Wall and railing	Application granted	Approx. 130m east of the scheme extents

	not to exceed 1.5m in height.		
24/02454/CLP	Single storey utility /kitchen room extension measuring 3.4m <sup>2</sup> , to rear of detached property.	Application granted	Approx. 200m east of the scheme extents
24/03262/TPO	Proposal to reduce crown height and spread of sycamore within residential garden by 30% (4m off height and 2m off spread) and crown lift to 4m over garden.	Application granted	Approx. 270m east of the scheme extents
24/05223/FUL	Convert attic, including formation of rear dormer with balcony, and installation of Velux roof windows.	Awaiting assessment	Approx. 285m east of the scheme extents

While it is not possible to gain an understanding on the timing or duration of the above planning applications, it is considered that even in the event that the above planning applications were being progressed at the same time as the planned BEAR Scotland carriageway resurfacing works, given the small-scale nature of the planning applications, no in-combination effects are anticipated.

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 A720 EB trunk road boundary 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 1ha.

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 A720 eastbound 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 A720 eastbound 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. No impacts on the environment are expected during the operational phase as a result of the works.

Location of the scheme:

- The scheme is situated directly alongside the Water of Leith – Spylaw Park to Juniper Green LBS; however, the assessment has concluded that there will be no impacts on the LBS.
- The scheme does not lie within any sites of historical, cultural, or archaeological significance. While the Colinton CA is located directly adjacent and Juniper Green CA is located approx. 10m west, the assessment has concluded there will be no impacts to either conservation area.
- The scheme is not located within any areas designated for landscape interests.
- Land use will not change as a result of the works.
- The works do not require any private land acquisition.

- The scheme 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 excluding weekends to complete, with the aim being to complete the noisiest works by 23:00.
- With good practice pollution prevention measures implemented onsite, there is a negligible risk of a pollution event e.g., compliance with the SEMP.

## Annex A

“Sensitive area” means any of the following:

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





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