



**TRANSPORT
SCOTLAND**
CÒMHDHAIL ALBA

Environmental Impact Assessment Record of Determination

A720 Dreghorn Eastbound

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Project Details

Description

BEAR Scotland has been commissioned by Transport Scotland to carry out resurfacing works on the A720 Dreghorn eastbound carriageway. The works will consist of a mix of inlay depths of 50mm and 120mm. The works will also involve the reinstatement of road markings and studs for a length of 1150m (approx. 1.005ha).

The construction activities for the resurfacing procedure are as follows:

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

The works are currently programmed to be completed within the 2025/2026 financial year, with works currently expected to begin on 8th April 2025. Works are programmed to be completed over four nights (20:00 – 06:00). TM will involve four nighttime full road closures of the A720 eastbound carriageway with a signed diversion in place from the A720 Dreghorn eastbound offslip to the Lothianburn eastbound onslip. The details of the eastbound diversion are as follows:

- Leave the A720 using the Dreghorn eastbound offslip.
- Take the second exit at the roundabout to turn onto Redford Road (B701).

Description of local environment

Air quality

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

The scheme lies within the boundary of the City of Edinburgh Council, which has four active [Air Quality Management Area \(AQMA\)](#) within its administrative boundary. The closest of which is, 'Edinburgh AQMA No.1 City Centre', located approx. 3.7km northwest of the scheme extents and has been declared for nitrogen dioxide (NO₂).

There are 11 sites registered on the Scottish Pollutant Release Inventory ([SPRI](#)) for pollutant releases to air within 10km of the scheme:

- North British Distillery, Wheatfield Road, Edinburgh – Animal and Vegetable Products from the Food and Beverage Sector, declared for carbon dioxide (CO₂), hydrochlorofluorocarbons (HCFCs), hydrofluorocarbons (HFCs) and non-methane volatile organic compounds (NMVOCs), located approx. 4.4km north of the scheme.
- MacFarlan Smith Limited, Wheatfield Road, Edinburgh – Chemical Industry, declared for chloroform, NMVOCs and toluene, located approx. northwest 4.4km northwest of the scheme.
- Sighthill Biscuit Factory, Edinburgh – Animal and Vegetable Products from the Food and Beverage Sector, declared for HFCs, located approx. 4.6km northwest of the scheme.
- Millerhill Anaerobic Digestion Facility, Dalkeith – Waste and Waste-Water Management, declared for ammonia, carbon monoxide and methane, located approx. 5.6km northeast of the scheme.
- Oatslie Sandpit Landfill, Cleugh Road, Midlothian – Waste and Waste-Water Management, declared for CO₂, chlorofluorocarbons (CFCs), HCFCs and methane, located approx. 5.7km southeast of the scheme.
- Gogarbank Poultry, Corstorphine, Edinburgh – Intensive Livestock Production and Aquaculture, declared for ammonia, particulate matter (PM₁₀ and smaller), located approx. 6.3km northwest of the scheme.
- Drummond Moor (No2) Landfill, Rosewell, Midlothian – Waste and Waste-Water Management, declared for CFCs, HCFCs and methane, located approx. 8.5km southeast of the scheme.
- Millerhill Recycling and Energy Recovery Centre – Waste and Waste-Water Management, declared for antimony, cadmium, CO₂, chromium, copper, dioxins and furans as WHO TEQ, manganese, mercury, nickel, nitrogen oxide (NO) as NO₂, PM_{2.5} and smaller, located approx. 8.5km northeast of the scheme.

- Shewington OCCS, Newbigging OCCS, Whitehill – Mineral Industry, declared for methane, located approx. 8.8km southeast of the scheme.
- Ravelrig Quarry, Kirknewton, Midlothian – Mineral Industry, declared for PM₁₀ and smaller and PM_{2.5} and smaller, located approx. 8.9km southwest of the scheme.
- Edinburgh Sewage Treatment Works, Leith – Waste and Waste-Water Management, declared for ammonia, CO₂, chloroform and methane, located approx. 9.1km northeast of the scheme.

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

Cultural heritage

The [PastMap](#) and [Historic Environment Scotland \(HES\)](#) online mapping tools records two designated sites within 300m of the scheme extents, none of which have connectivity to the scheme (i.e., lie > 15m from the scheme):

- Swanston Conservation Area (CA) lies approx. 17m south of the scheme and is highlighted for its architecture, with the only thatched properties remaining within the Edinburgh City boundary being present within the CA.
- Dreghorn Mains, Woodend Cottage Listed Building (LB28169) lies approx. 170m northwest of the scheme.

Of lesser cultural heritage value, seven undesignated cultural heritage assets (UCHAs) lie within 300m of the scheme extents, the closest of which lies approx. 170m northwest of the scheme:

- Edinburgh, Dreghorn, Woodend Canmore (ID: 237017) and Historic Environment Record (HER).

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 is therefore assessed to be low.

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

Landscape and visual effects

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

The Scottish Landscape Character Type map ([Scottish Landscape Character Types](#)) records no Landscape Character Type (LCT) within the scheme extents. LCT 268-Upland Hills – Lothian borders the A720 to the south of the scheme, the key characteristics of which are as follows:

- Visually sensitive north-facing escarpment overlooking Edinburgh and its predominantly flat surrounding area.
- Two parallel ridge lines separated by a deep internal valley.
- Visual containment of inner valleys and core areas.
- Diversity of landcover types, including heather moor, grassland, broadleaf woodland, open water and wetland.
- Drystone dykes and sheep stells on upper slopes.
- Rich variety of heritage assets, including cairns, forts and enclosures.
- Heavily used recreational resource, with network of footpaths and minor tracks linking important access points.
- Visual importance derived from dominant position within heavily populated lowland area.
- Forms a distinct and recognisable backdrop from many settlements within adjacent lowlands and Upland Fringes.
- Panoramic views from summits and ridges.

[Land use](#) within 300m of the scheme is categorised into the following:

- Motorway and major roads.
- Urban area.
- Plantation.
- Military site.
- Golf course.
- Industrial and commercial areas.
- Rectilinear fields and farms.

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

- 'Class 3.1' - Land capable of producing consistently high yields of a narrow range of crops and/ or moderate yields of a wider range. Short grass leys are common.

There are four areas of woodland on the [Native Woodland Survey of Scotland](#) (NWSS) within 300m of the scheme extents, all of which are assessed to be lowland mixed deciduous woodland:

- Approx. 0.6ha lies approx. 211m northwest of the scheme.
- Approx. 1.1ha lies approx. 255m north of the scheme.
- Approx. 0.6ha lies approx. 265m northwest of the scheme.
- Approx. 0.5ha lies approx. 268m north of the scheme.

Additionally, there are three areas of woodland on the [Ancient Woodland Inventory Scotland](#) within 300m of the scheme extents, all of which are assessed to be of long-established plantation origin:

- Approx. 2.2ha lies approx. 151m south of the scheme.
- Approx. 22ha lies approx. 174m northwest of the scheme.
- Hunter's Tryst Plantation (approx. 4.8ha) lies approx. 286m north of the scheme.

In addition, the following woodland lies within 300m of the scheme extents:

- Conifer woodland (approx. 2.5ha).
- Mixed mainly conifer woodland (approx. 0.5ha).
- Broadleaved woodland (approx. 0.5ha).
- Young trees (approx. 7.3ha).

There are no trees covered by a Tree Preservation Order (TPO) with connectivity to the scheme extents.

The existing trunk road is a prominent linear landscape feature. The trunk road corridor, for example, has a distinct character shaped by 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 does not share connectivity with or lie within 2km of any European Sites (e.g. SAC, SPA or Ramsar Site).

There are no Sites of Special Scientific Interest (SSSI) or Local Nature Reserves (LNRs) designated for biodiversity features within 300m of the scheme extents. However, the Pentland Hills Regional Park is located to the south of the scheme bordering the westbound carriageway of the A720.

A search of the NBN online mapping tool records six plant species listed within the Network Management Contract (NMC) within 2km of the scheme extents (within the last 10-years):

Invasive Non-Native Species (INNS):

- Japanese knotweed (*Reynoutria japonica*).

Injurious Weeds:

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

Invasive Native Perennials:

- Rosebay willowherb (*Chamaenerion angustifolium*).

The nearest record pertains to Japanese knotweed (recorded in 2015) and spear thistle (recorded in 2016) approx. 0.7km south of the scheme.

A search of the Asset Management Performance System (AMPS) online mapping tool records common ragwort throughout the verge of the scheme extents. Giant hogweed (*Heracleum mantegazzianum*) is also present approx. 80m northwest of the western extents of the scheme within the verge of the eastbound offslip.

Habitat immediately bordering the trunk road tends to be of low intrinsic value because the existing road verge is subject to cyclic maintenance e.g., grass cutting, weed control, tree, and shrub cut-back etc. The roadside verges are comprised of homogenous managed areas of semi-improved grassland alongside broadleaved tree lines and scrub. Roadside vegetation generally offers low ecological habitat value due to its limited scale, fragmented nature and high potential for disturbance owing to cyclic landscape maintenance and the proximity of the trunk road (with its fast-flowing traffic). The presence of the trunk road also restricts continuity of, and connectivity between, habitats either side of the trunk road boundary.

Outwith the trunk road boundary, urban areas lie to the north which relate primarily to residential areas. To the south large areas of agricultural land surrounding the scheme forms a pattern of open and exposed fields containing predominantly pastoral land, out with these fields, pockets of deciduous woodland are found to the south of the scheme. The result of this intensive agricultural land management and urban areas to the north is to restrict the occurrence of semi-natural and natural vegetation types. Most field boundaries are comprised of wooden fencing and vegetative features further delineating field boundaries e.g., shrub hedgerow, rough grassland, ruderal herb stands and scrub. Linear features at field boundaries have wildlife value, both as corridors in an intensively managed landscape, and as habitats for birds and small animals.

Geology and soils

The A720 within the scheme extents is not located within 300m of a [Geological Conservation Review Site](#) (GCRS) One [Local Geodiversity Sites](#) (LGS) is present within 300m of the scheme extents. Dreghorn Link LGS is located approx. 70m north

alongside the Dregghorn Link Road and relates to two 300m long road cut exposures that show a type of 'Upper Old Red Sandstone' of latest Devonian age (359 million years old). The [National Soil Map of Scotland](#) online mapping tool records that the generalised soil types beneath the scheme extents are:

- Gleys.
- Alluvial Soils.
- Brown Soils.

The major soil groups beneath the scheme extents are:

- Mineral Gleys.
- Alluvial Soils.
- Brown Soils.

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

- Till, Devensian (Diamicton).

The bedrock geology within the scheme extents is recorded as:

- Kinnesswood Formation (Sandstone).

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

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

Material assets and waste

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

- TS2010 10mm Site Class 1 Surface Course.
- AC20 Dense Binder.
- Tack/Bond Coat.
- Paving Grade Bitumen to seal vertical faces.
- Weatherline+ and Thermoplastic Extrusion Road Markings.
- Embedded and Surface Mounted Road Studs.

As the value of the scheme is less than £350,000, a Site Waste Management Plan (SWMP) is not required for these works.

The 1150m scheme involves removal of the surface course and localised areas of binder. In total, approx. 1225 tonnes of bituminous material (European Waste Catalogue Code: 17 03 02) will be removed from site, none of which is classified as hazardous material containing coal tar.

Noise and vibration

Receptors – refer to ‘Population and Human Health’.

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

The night-time modelled noise level (L_{night}) ranges between 70 and >80 decibels within the scheme extents ([Scotland’s Noise](#)), with levels dropping to between 70 and 75 decibels at the nearest noise sensitive receptor (NSR) (residential property).

The baseline noise and vibration in the scheme extents is primarily influenced by vehicles travelling along the A720 trunk road. Secondary sources most likely arise from day-to-day agricultural activities and from motor vehicles travelling along nearby roads.

Population and human health

Numerous residential properties and a golf course are found within 300m of the scheme extents, the closest of which (residential properties) lie approx. 18m north of the scheme and are partially screened from the scheme by roadside tree shelterbelt.

One additional property of note lies within 300m of the scheme extents:

- Travelodge Edinburgh Dreghorn lies approx. 52m north of the scheme and is partially screened from the scheme by roadside tree shelterbelt.

One core path (ID: CEC2) is located within the eastern and western extents of the scheme; however, it does not have connectivity to the scheme as it crosses the A720 via an overpass.

Street lighting is not present within the scheme extents.

The A720, within the scheme extents, is a dual carriageway with the national speed limit applying throughout. The Annual Average Daily Traffic (AADT) flow is high (89,836 motor vehicles) (ID: 91215, 2023)) ([Road Traffic Statistics](#)).

Road drainage and the water environment

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

- Burdiehouse Burn/Swanston Burn is a river in the Edinburgh Coastal catchment of the Scotland river basin district (ID: 3600) which is located approx. 40m south of the eastern extents of the scheme and is separated from the scheme by the westbound A720 and approx. 30m of woodland. The river is also culverted below the A720 approx. 110m east of the scheme. The main stem is approximately 15.3km in length, is culverted below the eastern extents of the scheme and classified as being in 'Poor' condition. The water body has been designated as a heavily modified water body on account of physical alterations that cannot be addressed without a significant impact on the drainage of agricultural land.

Four unclassified surface waterbodies are located within 300m of the scheme extents:

- Drain1, a tributary of Burdiehouse / Swanston Burn, lies approx. 38m south of the scheme and is separated from the scheme by the A720 westbound carriageway and roadside tree shelterbelt.
- Drain2 lies approx. 51m south of the scheme.
- Drain3 lies approx. 244m south of the scheme.
- Drain4 lies approx. 293m southeast of the scheme.

A search of the [SEPA's Flood Map](#) online mapping tool records that one small area on the A720 eastbound carriageway within the scheme extents is recorded as having a medium likelihood of surface water flooding (i.e., each year this area has a 0.5% chance of flooding) and areas adjacent to the eastbound carriageway are recorded as having a high likelihood of surface water flooding (i.e., each year these areas have a 10% chance of flooding).

A search of [Scotland's Environment \(SE\)](#) online mapping tool determined that the trunk road lies on the 'Morningside' groundwater, which has been classified as being in 'Good' condition.

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

Climate

The Climate Change (Scotland) Act 2009 sets out the target and vision set by the Scottish Government for tackling and responding to climate change ([Climate Change \(Scotland\) Act 2009](#)). The Act includes a target of reducing CO₂ emissions by 80% before 2050 (from the baseline year 1990). The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 amended the Climate Change (Scotland) Act 2009 to bring the target of reaching net-zero emissions in Scotland forward to 2045 ([Climate Change \(Emissions Reduction Targets\) \(Scotland\) Act 2019](#)).

The Scottish Government has since published its indicative Nationally Determined Contribution (iNDC) to set out how it will reach net-zero emissions by 2045, working to reduce emissions of all major greenhouse gases by at least 75% by 2030 ([Scotland's contribution to the Paris Agreement: indicative Nationally Determined](#)

[Contribution](#)). 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.

- A water-assisted dust sweeper will sweep the carriageway after dust-generating activities, and waste will be contained and removed from site as soon as is practicable.
- Materials that have a potential to produce dust will be removed from site as soon as possible, and vehicles that remove cold-milled material from site will have sheeted covers.
- Ancillary plant, vehicles and NRMM will have been regularly maintained, paying attention to the integrity of exhaust systems.
- Ancillary plant, vehicles and NRMM will be switched off when stationary to prevent exhaust emissions (e.g., there will be no idling vehicles).
- Cutting, grinding, and sawing equipment (if required) will be fitted or used in conjunction with suitable dust suppression techniques e.g., local exhaust ventilation system that fits directly onto tools.
- Regular monitoring (e.g., by engineer or Clerk of Works) will take place when activities that have the potential to impact local air quality are occurring. In the unlikely event that unacceptable dust or exhaust emissions are emanating from the site, the operation will, where practicable, be modified and re-checked to verify that the corrective action has been effective. Actions to be considered include: (a) minimizing cutting and grinding on-site, (b) reducing the operating hours, (c) changing the method of working, etc.

Landscape and visual effects

During construction there will be a short-term impact on the landscape character and visual amenity of the local area due to the presence of construction plant, vehicles, and TM. However, all construction is restricted to areas of made/engineered ground on the A720 eastbound carriageway, and works are programmed to be undertaken at night (four 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

While the Pentland Hills Regional Park is located to the south of the scheme extents, it is separated from the works by the A720 westbound carriageway and existing shelterbelt plantation, with the closest areas within its boundary relating to pastoral land. As such the risk of impacts is considered to be negligible.

A temporary short-term increase in noise levels, site lighting and the presence of a work force may cause disturbance to local wildlife if present in the vicinity of the works. The works will, for example, require a range of ancillary plant, vehicles and NRMM which will emit noise and create potential disturbance. The works will also require delivery of materials and the presence of personnel and site lighting 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. The potential for significant species disturbance within the area of construction is therefore somewhat diminished.

INNS giant hogweed has been identified approx. 80m northwest from the scheme extents, as such construction activities are considered to be sufficiently distanced to negate any potential impacts. However, there is a requirement for traffic to be diverted along the A720 eastbound offslip directly adjacent to the identified giant hogweed, as such there is risk for signage and site operatives to be present within this section of the verge which could result in the spread of this species. Providing mitigation measures detailed below are adhered to, the risk of spreading INNS is considered to be negligible. Injurious weed common ragwort has been recorded along the verge within the scheme extents, however the works will be restricted to the existing A720 and with the mitigation measures below being adhered to, the risks of impacts from this species are considered to be negligible.

Considering the nature, duration, size, and scale of the scheme, and with implementation of mitigation detailed above, the proposed works impacts on biodiversity throughout the construction period are therefore assessed to be temporary, minor adverse in magnitude.

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

Biodiversity mitigation measures:

- Where possible, artificial lighting used during night works will be sufficiently screened and aligned so as to ensure that there is no direct illumination of neighbouring habitat (e.g., locations adjacent to tree shelterbelt, woodland etc.).
- Site operatives will be made aware of the location of the INNS giant hogweed. No signage, equipment of site operatives will be permitted within the verge at this location to negate the potential for spread of this species.
- Given the records of giant hogweed along the TM route and injurious weed common ragwort throughout the verge within the scheme extents, Toolbox Talk TTN-009 'Working with Injurious Weeds and Invasive Plants', will be briefed to all staff prior to the commencement of works.
- Site personnel will remain vigilant for protected species and will not approach or touch any animals seen on site. Any sightings of protected species will be reported to BEARs Environmental Team. Should a protected species be encountered or move within 50m of the active works (including compounds), works will be temporarily halted until the animal(s) move at least 50m away from the construction site, or until BEAR's Environmental Team can provide advice.
- The Contractor will employ 'soft start' techniques for all noisy activity to avoid sudden and unexpected disturbance during works. Each time the activity is started up after a period of inactivity, the noise levels will be gradually increased

over a period of 30 minutes to permit animals (including birds) to move away from the disturbance.

- All equipment stored onsite, if necessary, will be checked at the start of each shift to ensure no animals are present. Any storage containers/plant within the compound will also be secured overnight to prevent exploration by mammal species. Any areas where an animal could become trapped (e.g., storage containers) will also be covered at the end of each working day.
- People, ancillary plant, vehicles, NRMM and materials will be restricted to areas of made/engineered ground (as much as is reasonably practicable). If during works unforeseen access to the surrounding environment is required, works will cease in this area and BEAR Scotland's Environmental Team will be contacted to allow consideration of potential environmental effects.
- BEAR Scotland's Environmental Team will be contacted to allow consideration of potential environmental effects if:
 - unforeseen site clearance is required,
 - unplanned works will be undertaken out with the carriageway boundary,
 - there is any deviation from the agreed plan, programme and/or method of working,
 - nesting birds are found onsite.
- BEAR Scotland's Control Room will be contacted if there is a pollution incident.

Material assets and waste

Minimising impacts arising from construction materials are focussed upon making the most efficient use of materials onsite to reduce the need for imported primary materials and minimise the creation and disposal of waste through (i) reduction, (ii) re-use, and (iii) recycling. Potential impacts have been assessed for both the construction and operational phases of this scheme. It is anticipated that most material impacts are likely to arise during construction, though long-term residual impacts could occur post construction during the operational phase e.g., during the disposal of materials arising from routine maintenance operations.

However, the detailed design will reduce the requirements for primary materials e.g., the carriageway surfacing, and subbase will be carefully considered to minimise the requirements for importing primary material. Materials will also be derived from recycled, secondary, or re-used origin as far as practicable within the design specifications to reduce natural resource depletion. Specifying TS2010 surface course also allows a wider array of aggregate sources to be considered when compared to typical stone mastic asphalt (SMA). As a result, the use of TS2010 should reduce the usage of imported aggregates and increase the use of a wider range of sustainable aggregate sources. The design life for the TS2010 surfacing is also estimated to be 20 years. The enhanced durability of TS2010 therefore reduces

reoccurring routine maintenance and associated levels of traffic disruption to this section of road over the period.

Considering the nature, duration, size, and scale of the scheme, and with implementation of the mitigation detailed below, the proposed works impacts on material assets and waste throughout the construction period are therefore assessed to be temporary, negligible adverse in magnitude. Upon completion of the works, no residual impacts are anticipated on materials or waste.

Material assets and waste mitigation measures:

- Good materials management methods (e.g., 'just-in-time' delivery) will be implemented wherever possible.
- The Contractor will comply with all 'Duty of Care' requirements, ensuring that any surplus materials or waste are stored, transported, treated, used, and disposed of safely without endangering human health or harming the environment. Waste transfer notes and/or waste exemption certificates (if required) will also be completed and retained.
- The Contractor is responsible for the reuse / disposal of non-hazardous road planings, and this has been registered in accordance with a Paragraph 13(a) waste exemption issued by SEPA as described in Schedule 3 of the Waste Management Licensing Regulations 2011 (exemption number: WML/XS/2010464), 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 lie approx. 18m north of the A720 within the scheme extents.

However, the works are not located within a CNMA or CQA, and while they will be completed over four nights, the aim will be 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.

- 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. Given the proximity of properties there is potential for noise, vibration and visual disturbance. However, the works will be of short duration (i.e. over four nights) and providing mitigation measures detailed below are adhered to the impacts are assessed to be somewhat reduced.

Moreover, TM will be in place for four nights, it will be restricted to nighttime hours when traffic flows will be at a minimum and a signed diversion will be in place, as such no congestion issues are expected during the proposed construction hours.

Considering the nature, duration, size, and scale of the scheme, and with implementation of the mitigation described above, impacts on population and human health during construction 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 such as Travelodge Edinburgh Dreghorn informed of the proposed working schedule, particularly the times and durations of noisy construction activities. The communication strategy will also provide a 24-hour contact number for the BEAR Scotland Control Room.
- Given the proximity of residential properties Toolbox Talk TTN-042 Being a Good Neighbour will be briefed to staff prior to the commencement of works.
- Advanced signage will be strategically placed on the trunk road to notify stakeholders of the road closure and diversion at least seven days in advance.
- A Traffic Management Plan (TMP), which includes measures to avoid or reduce disruption to road traffic, will be produced in accordance with the Traffic Signs Manual (Department of Transport 2009). The TMP will ensure that there is no severance of community assets, access routes or residential development.

Road drainage and the water environment

During resurfacing works, there is potential for temporary adverse impacts on the water environment. Potential changes in water quality e.g., from pollution events (either by accidental spillage of sediments, particulate matter, chemicals, fuels or by mobilisation of these in surface water caused by rain) during works have the potential to have a direct or indirect effect on surrounding waterbodies such as the Burdiehouse Burn / Swanston Burn and Drain1.

However, all works will be restricted to the A720 carriageway and there will be no requirement to enter any watercourse as such there is limited risk for direct impacts. Furthermore, the potential for direct or indirect pollution incident to a waterbody is considered unlikely e.g., experience gained from BEAR maintenance schemes elsewhere on the network has shown that where standard best working practice is adopted (e.g., adherence to SEPA GPPs, utilisation of drain covers or similar, etc.), water quality is protected.

Considering the nature, duration, size, and scale of the scheme, and with implementation of the mitigation detailed below, the proposed works impacts on the road drainage and water environment are assessed as temporary, negligible adverse in magnitude.

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

Road drainage and the water environment mitigation measures:

- Site operatives will be made aware of the proximity of Burdiehouse Burn / Swanston Burn and Drain1.
- If any works are identified that would require entering a waterbody, BEAR Scotland's Environmental Team will be contacted (before works commence) to allow consideration of potential environmental effects.
- The abstraction or transfers of water from, discharges to, or the washing of tools in surface waterbodies identified is not permitted.
- Appropriate measures will be implemented during resurfacing operations to limit the potential for wastes (i.e. road planings) and materials (i.e. new asphalt) to enter any gullies present on site. On completion of resurfacing operations, any gullies present on site will be visually checked to ensure they have not become blocked as a result of the scheme.
- All site personnel will be made aware of site spillage response procedures and in the event of a spill, all works associated with the spill will stop, and the incident reported to the Site Supervisor. Small spills that did not leave the site boundary and are cleaned up without material environmental harm or residual environmental impact would most likely not be required to be notified to SEPA or other authorities. However, all such incidents will be recorded and reported to BEAR Scotland's Environmental Team. In the event of a 'serious incident', SEPA will be notified without delay. Such notification will include: (i) the time and duration of the incident, (ii) a description of the cause of the incident, (iii) any effect on the environment as a result of the incident, and (iv) any measures taken to minimise or mitigate the effect and prevent a recurrence.
- All waste, vehicles, ancillary plant, NRMM and fuels will be stored in the compound (s) or laydown area and will be secured and located, if space is available, at least 10m from drainage entry points, in order to comply with GPP 5 'works and maintenance in or near water'.
- Refuelling will only be undertaken at designated refuelling areas (e.g., on hardstanding, with spill kits available, and >10m from drainage entry points, where practicable). Spill kits will also be available within all site vehicles and spill kits will be replenished onsite when required. Only designated trained and competent operatives will be authorised to refuel plant. Generators, and other ancillary plant and NRMM, where there is a risk of leakage of oil or fuel, will have internal bunding or will 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 A720 within the scheme extents upon completion of the works.

Works are restricted to areas of made ground on the A720 eastbound carriageway surface, with access to the scheme gained via the A720 mainline. TM will employ four nighttime full road closures with a signed diversion in place. As such, the proposed works' impacts on road traffic accidents are assessed to be of negligible magnitude.

A Site Environmental Management Plan (SEMP) will be produced by BEAR Scotland which sets out a framework to reduce the risk of adverse impacts from construction activities on sensitive environmental receptors. The Contractor will comply with all conditions of the SEMP during works and may be subject to audit throughout the contract.

Considering the above, the vulnerability of the project to of major accidents and disasters is considered to be low.

Assessment cumulative effects

The proposed works are not anticipated to result in significant environmental effects. Due to the nature of the proposed works, no cumulative effects are anticipated with any other developments in the vicinity.

A search of the Scottish Road Works Commissioner’s website ([map search](#)) has identified that no other road works are currently ongoing, or noted as being planned, on the A720 trunk road or surrounding roads in proximity to the scheme which will be undertaken at the same time.

In addition, a search using the [City of Edinburgh Council ‘Simple Search’](#) identified 14 planning applications within 300m of the scheme (Table 1).

Table 1: Planning Applications (In Last 2-Years)

Reference	Description	Status	Distance from Works
23/06090/CLP	Erection of conservatory	Granted	Approx. 19m north
24/03801/CLP	Proposal to extend existing semi-detached dwelling house with the construction of a single storey pitched roof extension	Granted	Approx. 67m north
24/01267/FUL	Proposed extension and garage conversion	Granted	Approx. 99m north
24/04586/PAN	Technical, accommodation, and support facilities including a new medical centre, new offices, new accommodation blocks, new stores, new garages and workshop and a new sports pitch and parking	Pre-Application Consultation Approved	Approx 121m northwest

Reference	Description	Status	Distance from Works
23/06332/FUL	Demolish the existing conservatory and form a new extension	Granted	Approx. 143m north
24/03022/FUL	Removal of rear window and area of external wall to form patio door with raised deck and stairs leading to back garden and internal alterations to dwelling house	Granted	Approx. 150m north
25/00396/FUL	Alter and extend dwelling house	Local Delegated Decision	Approx. 161m north
23/01561/CLP	Disabled adaptation and garage conversion	Granted (Fast Track Decision)	Approx. 164m north
22/04135/VARY	Non-material variation application to 22/04135/FUL	Varied	Approx. 174m northeast
24/02515/CLP	Erection of replacement conservatory frames	Granted	Approx. 190m north
24/03610/FUL	Erect single storey extension to side of dwelling	Granted	Approx. 221m north
24/04550/FUL	New dormer to rear elevation	Granted	Approx. 240m northeast
23/02126/FUL	Proposed alterations to front steps, formation of two storey side extension and single storey rear extension with associated alterations to the garden	Granted	Approx. 244m northeast
24/05376/CLP	Proposed garage conversion and alterations	Granted	Approx. 251m north

While it is not possible to gain an understanding on the timing or duration of the above planning applications, all applications with the exception of 24/04586/PAN, relate to small scale works, which if progressed at the same time as the planned BEAR Scotland resurfacing works would not be expected to result in any in-combination impacts given that the additional short duration (four nights) and minor nature of the scheme. While 24/04586/PAN relates to larger scale works, it is currently within the pre-application stage and therefore will not have the potential to be progressed at the same time as the BEAR Scotland resurfacing works. Nevertheless, given the distance separating the scheme from the planning application, the small-scale nature and short duration of the scheme, in the unlikely event that the scheme were to be progressed at the same time as 24/04586/PAN, no in-combination effects would be anticipated.

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 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.

Location of the scheme:

- The scheme does not lie within 2km of a designated site e.g., SAC, SPA or Ramsar Site.

- The scheme does not lie within any sites of historical, cultural, or archaeological significance.
- The scheme is not located within any areas designated for landscape areas.
- Land use will not change as a result of the works.
- The works do not require any private land acquisition.
- The scheme is 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 four nights to complete, with the aim being to complete the noisiest works by 23:00.
- With good practice pollution prevention measures implemented onsite, there is a negligible risk of a pollution event e.g., compliance with the SEMP.

Annex A

“sensitive area” means any of the following:

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



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