



**TRANSPORT  
SCOTLAND**  
CÒMHDHAIL ALBA

# **Environmental Impact Assessment Record of Determination**

## **M80 Junction 9 Southbound Onslip**

## Contents

|  |           |
|--|-----------|
| <b>Project Details .....</b>   | <b>3</b>  |
| Description.....   | 3         |
| Location .....   | 4         |
| <b>Description of local environment.....</b>   | <b>4</b>  |
| Air quality .....  | 4         |
| Cultural heritage .....  | 5         |
| Landscape and visual effects .....   | 6         |
| Biodiversity .....   | 7         |
| Geology and soils .....  | 8         |
| Material assets and waste .....  | 8         |
| Noise and vibration .....  | 9         |
| Population and human health .....  | 10        |
| Road drainage and the water environment.....   | 10        |
| Climate .....  | 11        |
| <b>Policies and plans .....</b>  | <b>11</b> |
| <b>Description of main environmental impacts and proposed mitigation .....</b>                   | <b>12</b> |
| Air quality .....  | 12        |
| Cultural heritage .....  | 13        |
| Landscape and visual effects .....   | 14        |
| Biodiversity .....   | 14        |
| Material assets and waste .....  | 16        |
| Noise and vibration .....  | 18        |
| Population and human health .....  | 19        |
| Road drainage and the water environment.....   | 20        |
| Climate .....  | 22        |
| Vulnerability of the project to risks .....  | 22        |
| Assessment cumulative effects.....   | 23        |
| <b>Assessments of the environmental effects .....</b>  | <b>24</b> |
| <b>Statement of case in support of a Determination that a statutory EIA is not required.....</b> | <b>24</b> |
| <b>Annex A.....</b>  | <b>26</b> |

## Project Details

### Description

BEAR Scotland has been commissioned by Transport Scotland to carry out carriageway resurfacing works. The proposed works will remove the identified defects and maintain pavement serviceability while increasing the lifespan of the road within the scheme extents by replacing existing sections of the pavement.

Construction activities include:

- Set up traffic management (TM) and mark out site.
- Mill existing bituminous material by road planer.
- Break up surfaces not accessible by planer (e.g., around gullies) with jackhammer and compressor.
- Collect and move excess material with loader/excavator.
- Loose material and clean laying surface collected and provided by sweeper.
- 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.
- New traffic counter installation and remove TM and open road.

The works are currently programmed to be completed at the start of the 2024/2025 financial year (April 2024 – August 2025 inclusive). Works are expected to commence on 8<sup>th</sup> April 2024 for a duration of two nights ending on 10<sup>th</sup> April 2024, with works operating at night (19:30 – 06:00). Traffic management will involve a full closure of the M80 at Junction 9 of the M9. Traffic will be diverted to continue along the M9 Southbound (SB) until the M876 Junction 3 Eastbound (EB) offslip, then onto the M876 Junction 3 Westbound (WB) onslip, where they will continue along the M876 WB until it merges within the M80 north of Hags.

## Location

The scheme lies on the M80 south of Cambusbarron, Stirling, with agricultural land and woodland bordering the carriageway within the majority of the scheme extents (Figure 1).



**Figure 1: Location Plan** Source: Asset Management Performance System (AMPS). © Europa Technologies Ltd. Contains Ordnance Survey data © Crown copyright and database right 2018.

## Description of local environment

### Air quality

Receptors – refer to ‘Population and Human Health.’

A search of the [Air Quality in Scotland](#) online mapping records that the scheme extents are not located within an Air Quality Management Area (AQMA), and 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 Stirling Council, which has no record of AQMA’s within its administrative boundary. The nearest AQMA lies within the boundary of Falkirk Council which has three AQMA’s within its administrative boundary, the closest of which lies approx. 10.6km south of the scheme (at the

nearest point), 'Falkirk Town Centre'. The 'Falkirk Town Centre' AQMA has been declared for nitrogen dioxide (NO<sub>2</sub>) and particulate matter (PM<sub>10</sub>).

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

- Boards Quarry, Denny, Falkirk - PM<sub>10</sub> (lies approx. 8km south of the scheme).
- Superglass Insulations Ltd, Stirling – numerous pollutants (lies approx. 3.8km north of the scheme).
- Stirling STW, 29 Whitehouse Road, Stirling – methane (lies approx. 4.4km north of the scheme).
- Scotbeef Ltd, Longleys Farm, Bridge of Allan – hydrofluorocarbons (HFCs) (lies approx. 9km north of the scheme).
- UCP, Bridge of Allan, Stirling – HFCs (lies approx. 8.7km north of the scheme).
- Cambusview Poultry Unit, Cambus, Alloa – ammonia and PM<sub>10</sub> (lies approx. 6km north east of the scheme).
- Cowiehall Quarry, Stirling - PM<sub>10</sub> (lies approx. 4km north east of the scheme).
- Norbord Europe Ltd, Station Road, Cowie – numerous pollutants (lies approx. 3.1km east).
- Bakelite Synthetics UK Ltd, Cowie – formaldehyde (lies approx. 3.3km east of the scheme).

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

## Cultural heritage

The PastMap and Historic Environment Scotland (HES) online mapping tools record that the scheme extents lie within The Battle of Sauchieburn Inventory Battlefield (IB) (ID: BTL38). The Battle of Bannockburn IB (ID: BTL4) also lies approx. 90m east of the scheme extents.

In addition approx. 16 undesignated cultural heritage assets (UCHAs) are recorded within 300m of the scheme extents, the closest of which lies approx. 80m north of the scheme extents:

- Snabhead Farm, Canmore site (ID: 187363) and Snabhead Farm Historic Environment Record (HER) (ID: 4390).

Construction of the M80 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.

## Landscape and visual effects

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

The Landscape Character Type (LCT) within the study area is 'Lowland Hill Fringes – Central' (no. 150) ([Scottish Landscape Character Types](#)). The key characteristics of 'Lowland Hill Fringes – Central' are:

- Undulating, rolling topography rising to larger scale hill landforms.
- Gradation of topography creates transitional landscape linking the open hills of more pronounced relief and the neighbouring settled valley landscapes.
- Diverse landcover of arable and open improved and unimproved pasture land, interlocks with woodland and forestry, with some estate landscapes with frequent beech hedgerows and shelterbelts.
- High proportion of woodland cover including large coniferous blocks, mixed shelterbelts and broadleaf tree clumps.
- Scattered residential development and small settlements on slopes, with recent expansion in some areas.
- Minor roads.
- Concentration of small water bodies, reservoirs and small watercourses.
- Strong interrelationship between stepped escarpment and lower foot slopes in Gargunnoch/Fintry and East Touch Fringe.
- Estate and designed landscapes give distinctive character to East Touch Fringe area.
- Hill fringes offer important panoramic views to neighbouring hills, valleys and straths, as well as large settlements such as Glasgow and Falkirk.
- A sense of remoteness and isolation in some areas despite proximity to settlement and relatively limited geographic extent.

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

- Motorway and major roads.
- Rectilinear fields and farms.
- Designed landscape.
- Managed woodland.

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

- 'Class 3.2' - Land capable of average production though high yields of barley, oats and grass can be obtained. Grass leys are common.

The [Native Woodland Survey of Scotland](#) records 3ha of lowland mixed deciduous woodland approx. 155m west of the scheme extents and 1.2ha of hawthorn scrub approx. 270m north east of the scheme extents.

Five areas registered on the [Ancient Woodland Inventory Scotland](#) as long established woodland of plantation origin are found within 300m:

- Bannockburn Wood, 5.2ha borders north extents of scheme (National Grid Reference (NGR): NS808886).
- Corse Hill, 3.3ha lies approx. 150m west of scheme extents (NGR: NS802882).
- Auchenbowie Wood, 8.7ha borders the southern extents of the carriageway (NGR: NS804877, NS803876).
- Avenue Wood, 6.5ha borders the southern extents of the carriageway (NGR: NS806876).
- Muir Wood, 19.5ha lies approx. 245m south east of the scheme extents (NGR: NS809871).

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, lighting 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, a 'sensitive area' designated for biodiversity features e.g., SAC, SPA, Ramsar, SSSI, etc.

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

A search of the NBN online mapping tool records no invasive non-native species (INNS), injurious weeds (as listed under The Weeds Act 1959) or invasive native perennials (as listed in the Trunk Road Inventory Manual) within 2km of the scheme extents (within the last 10-years).

A search of the Asset Management Performance System (AMPS) online mapping tool records a large section of giant hogweed (*Heracleum mantegazzianum*), an INNS, and small areas of rosebay willowherb (*Chamaenerion angustifolium*), an invasive native perennial, along the verge within the scheme extents.

Habitat immediately bordering the trunk road tends to be of low intrinsic value because the existing road verge is subject to cyclic maintenance e.g., grass cutting, weed control, tree, and shrub cut-back etc. The roadside verges are therefore comprised of a homogenous species-poor semi-improved grassland alongside



sections of broadleaved tree and shrub shelterbelt and woodland areas. Roadside vegetation generally offers low ecological habitat value due to its limited scale, fragmented nature and high potential for disturbance owing to cyclic trunk road landscape maintenance, and the proximity of the trunk road (with its fast-flowing traffic). The presence of the trunk road also restricts continuity of, and connectivity between, habitats either side of the trunk road boundary.

Outwith the trunk road boundary, agricultural land surrounding the scheme forms a pattern of open and exposed fields containing both arable and pastoral land. The result of this intensive agricultural land management is to restrict the occurrence of semi-natural and natural vegetation types. Most field boundaries are comprised of wooden fencing, with vegetative features further delineating field boundaries e.g., shrub hedgerow, rough grassland, ruderal herb stands, scrub and tree shelterbelt. 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 M80 within the scheme extents is not located within a [Geological Conservation Review Site](#) (GCRS) and there are no [Local Geodiversity Sites](#) (LGS) with connectivity to the scheme extents.

The [National Soil Map of Scotland](#) online mapping tool records that the generalised soil type within the scheme extents is Brown Soils and Mineral Gleys and the major soil group is Brown Soils and Gleys.

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:

- Limestone Coal Formation, Sedimentary Rock Cycles (Clackmannan 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.

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 involve the resurfacing of the southbound carriageway. The existing carriageway surface will be milled by road planer and new bituminous



surface course material will be laid by paver and compacted using a heavy roller. As such, materials required for the scheme will be:

- TS2010 surface course.
- Bitumen emulsion.
- Hot bitumen.
- Marker paint.
- Cold bitumen sealant.
- Tar glue remover.
- Thermoplastic road markings.
- Surface mounted and milled road studs.

The 1.13km scheme involves removal of the surface course. Bituminous material (European Waste Catalogue Code: 17 03 02) will be removed from site, none of which is expected to contain hazardous material containing coal tar, however coring investigations will be undertaken prior to construction.

The disposal of non-hazardous road planings has been registered in accordance with a Paragraph 13 exemption (exemption number: WML/XS/2008241), the rules of which will be complied with. In the event that hazardous material containing coal tar is required to be removed, to be determined following coring works, the contaminated planings will be classed as special waste and removed to a suitably licenced facility.

The scheme is less than £350,000 and as such, a Site Waste Management Plan (SWMP) is not required.

## 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 ( $L_{night}$ ) within the scheme extents ranges between 65 and 70 decibels, with levels dropping to between 55 and 50 decibels at the nearest noise sensitive receptor (NSR) (hotel property) ([Scotland’s Noise Scotland’s Environment](#)).

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

## Population and human health

There are several residential properties that lie within 300m of the scheme extents, the nearest lies approx. 100m east of the southern scheme extents. The residential properties are screened from the scheme extents by woodland shelterbelt (approx. 80m wide).

Travelodge Stirling M80, lies approx. 75m north of the works at the northern extent of the scheme and is screened by a combination of woodland shelterbelt (approx. 52m wide) and raised roadside embankment.

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

Street lighting is not present throughout the scheme.

The M80, within the scheme extents is a dual carriageway with the national speed limit. The Annual Average Daily Traffic (AADT) flow is high (36,129 motor vehicles (ID: 40704, 2022)) ([Road Traffic Statistics](#)) and is comprised of:

- 93 two wheeled motor vehicles.
- 25,611 cars and taxis.
- 82 buses and coaches.
- 7036 light goods vehicles.
- 3307 heavy goods vehicles.

There are no congestion issues noted on the M80 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 no classified surface waterbodies located within 300m of, spanned by or culverted beneath, the scheme extents.

One unclassified waterbody is found within 300m of the scheme extents. An unnamed waterbody, hereafter referred to a Drain 1, is located 20m east of the M80 within southern extents of the scheme.

A search of the [SEPA's Flood Map](#) online mapping tool records that the scheme extents of the trunk road is not at risk of flooding.

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

A search of the [SE](#) online mapping tool determined that the trunk road, within the scheme extents, does not lie within a Nitrate Vulnerable Zone.

## 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 ([The 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 (<https://www.gov.scot/publications/scotlands-contribution-paris-agreement-indicative-ndc/>). 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 \(transport.gov.scot\)](#)).

## 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 milling the existing carriageway surface, as well as exhaust emissions from ancillary plant and vehicles. As a result, there is potential for dust, particulate matter, and exhaust emissions (DPMEE) to be emitted to the atmosphere.

However, considering the nature of the scheme, and 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 DPMEE will also, if possible, be undertaken away from any surrounding properties.
- 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).
- Materials that have a potential to produce dust will be removed from site as soon as possible.
- Regular monitoring (e.g., by engineer or Clerk of Works) will take place when DPMEE generating activities are occurring. In the unlikely event that unacceptable DPMEE 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) minimising reducing the operating hours, (b) changing the method of working, etc.

## Cultural heritage

While the works are located within the boundary of 'Battle of Sauchieburn' Inventory Battlefield, the construction of the M80 road corridor is likely to have removed any archaeological remains that may have been present within the trunk road boundary scheme extents. As such, the potential for the presence of unknown archaeological remains in the study area has therefore been assessed to be low. Furthermore, the works will be restricted to the existing carriageway boundary and depth and will not include any alterations that would affect the historic character of the Inventory Battlefield. Therefore application for consent or any other permission is not required.

People, ancillary plant, vehicles, NRMM and materials are restricted to areas of made/engineered ground within the boundary of the M80 and its associated verge. As such, there is negligible risk of disturbing or damaging previously undiscovered or unrecorded items of cultural interest throughout the scheme extents.

Given the nature of the scheme, and with implementation of mitigation detailed below, the proposed impacts on cultural heritage during the construction period is assessed to be negligible in magnitude.

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

Cultural heritage mitigation measures:

- All site personnel will be briefed on the location of the 'Battle of Sauchieburn' Inventory Battlefield, which is present within the scheme extents.
- All site personnel will be briefed on the importance of archaeological finds and will be instructed to inform the site supervisor where potential finds are made. If there are any unexpected archaeological finds, all works will temporarily stop, the area will be cordoned off and BEAR Scotland's Environmental Team will be contacted for advice.
- People, ancillary plant, vehicles, NRMM and materials will be restricted to areas of made/engineered ground (as much as is reasonably practicable but with particular care taken to avoid impacting the verge within the Inventory Battlefield boundary). Where access outwith 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 onsite is required that necessitates vegetation clearance or additional earthworks other than those currently programmed, BEAR Scotland's Environmental Team will be contacted.

## Landscape and visual effects

There will be a short-term impact on the landscape character and visual amenity of the site as a result of the presence of construction plant, vehicles, and TM.

However, people, ancillary plant, vehicles, NRMM and materials are restricted to areas of made/engineered ground within the M80 carriageway, and construction works are programmed to be undertaken at night on a rolling programme. In addition, the M80 within the scheme extents is screened from the wider environment by a combination of roadside embankments and tree shelterbelt planting. As such, the visual impact of the works will somewhat be reduced.

Considering the nature of the scheme, and with implementation of mitigation detailed below, impacts on landscape are assessed as temporary minor adverse in magnitude.

Upon completion of the works, no residual impacts are anticipated e.g., when complete, the visual appearance will remain largely unaffected, with the resurfaced carriageway being the only discernible change.

Landscape and visual effects mitigation measures:

- 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.
- 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.

## Biodiversity

The scheme is not situated within 2km of, and does not share connectivity with, any other 'sensitive areas' designated for biodiversity features e.g. SAC, SPA, Ramsar, SSSI, etc.

All works will be limited to carriageway resurfacing within the M80 carriageway boundary, and no plant, personnel or NRMM will access land outwith the works corridor.

The works will not require any vegetation removal, any permanent (or temporary) land-take, accommodation works, site clearance or locally gained resources. As such, the works do not involve any physical altering or removal of habitat and will not result in habitat fragmentation. Furthermore, there is no requirement to import topsoil

and as such there is limited potential to spread or introduce invasive or injurious flowering plant species.

A temporary short-term increase in noise levels may cause disturbance to other local wildlife. 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 removal of materials and the presence of personnel to facilitate the carriageway resurfacing. 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 road noise and visual disturbance pertaining to vehicle movements on the M80, and the scheme will be undertaken over two nights. The potential for species disturbance within the area of likely construction disturbance is therefore somewhat diminished.

Giant hogweed and rosebay willowherb have been identified along the verge of the southbound carriageway within the scheme extents, however, all works are restricted to the carriageway road surface with no vegetation clearance required. As such, there is limited potential for the spread or introduction of INNS, invasive native perennials, or injurious flowering plant species. Giant hogweed and rosebay willowherb (and any other invasive or injurious flowering plant species) will also be controlled/treated by cultural methods and/or chemical weed control as per the South East Annual Landscape Management Plan.

Considering the nature of the scheme, and with the implementation of mitigation detailed below, the proposed work 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:

- All site personnel will be briefed on the location of INNS giant hogweed and invasive native perennial rosebay willowherb locations. No site personnel, vehicles, equipment or machinery will be permitted to enter the carriageway verge at these locations.
- Site personnel will remain vigilant for the presence of potentially unrecorded instances of invasive non-native flowering plant species (INNS) or injurious weeds in road verges throughout the works period.
- Given the presence of INNS giant hogweed and invasive native perennial rosebay willowherb, Toolbox Talk TTN-009 Working with Injurious Weeds & Invasive Plants will be briefed prior to works commencing.
- 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 Environmental Team. Should a protected species be encountered or move within 50m of the active works, 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 (and birds) to move away from the disturbance.
- 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, surface waterbodies) to ensure minimal impact on nocturnal species.
- All equipment stored onsite will be checked at the start of each workday to ensure any mammal species are not present. Any storage containers/plant left on site, where necessary, will also be secured overnight to prevent exploration by any 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, to avoid mammals falling in and becoming trapped.
- 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, outwith that already planned.
  - Unplanned works must be undertaken outwith the carriageway boundary and adjacent verge.
  - 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 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 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 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 and waste mitigation measures:

- Good materials management methods (e.g., 'just-in-time' delivery), will be implemented wherever possible.
- The Contractor is responsible for the reuse / disposal of non-hazardous road plannings, 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/2008241), the rules of which will be complied with.
- 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.
- Designated areas will be identified within which all materials and personnel, including construction compounds (within the confines of the TM), 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 and waterbodies. Stockpiled materials with leachate potential, for example, will be stored away from road drainage to prevent cross-contamination with other materials, wastes, or groundwater.
- In the event that road planings containing coal tar are required removed they will be appropriately processed in line with Transport Scotland's Guidance Note on Dealing with Coal Tar Bound Arisings ([Coal Tar Guidance](#)). This will include:
  - Coal tar contaminated road planings will be classified as a Special Waste.
  - All waste will be appropriately segregated, with coal tar contaminated planings being kept separate from uncontaminated planings.

- Coal tar contaminated planings will be transported by a registered waste carrier and be accompanied by a SEPA-issued consignment note. SEPA will be notified no less than three working days (72 hours) before and no longer than one month before, prior to Special Waste leaving site. Special Waste will be sent to a facility that holds suitable pollution prevention and control permits and waste management licences. Copies of consignment notes will be retained for a period of three years.
- Waste will be transported in a safe and secure manner to prevent the release of contaminated material en-route.
- 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 mobile 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 COSHH safety data sheets and the Special Waste Regulations 1996. 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 works will, for example, require a range of ancillary plant, vehicles and NRMM for carriageway resurfacing. Noise will also be generated by loading/unloading materials, vehicle movement etc. As a result, there is potential for noise and vibration effects.

However, the works will be completed on a rolling programme, with the aim being to complete the noisiest works by 23:00. In addition, considering the likely sources of noise and vibration, the distance from the point of generation to Noise Sensitive Receptors (NSRs), 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 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 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.

Noise mitigation measures:

- The local authority environmental health will be notified of nighttime working by BEAR Scotland's design engineer.
- 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.
- Where possible, the noisiest work operations (e.g., cold milling, using breakers (jackhammers), chipping hammers, use of rollers, etc.) will be completed before 23:00.
- If unacceptable noise is emanating from the site the operation will, where possible, be modified and re-checked to verify that the corrective action has been effective. Actions to be considered include (a) reducing the operating hours, (b) repositioning equipment, (c) changing the method of working etc. Corrective actions will be actioned through the nonconformance 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 vehicle travellers. However, no congestion issues are noted, and TM will only be in place at night, when traffic flows will be at a minimum. In addition, the proximity of road space suggests that residents will have a degree of tolerance to noise and disturbance.

Considering the nature of the scheme, and with implementation of the mitigation described below, impacts on population and human health are assessed as temporary minor adverse in magnitude.

Upon completion of the works, no residual impacts are anticipated in relation to population and human health.

Population and human health mitigation measures:

- 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 the Travelodge Stirling M80 informed of the proposed working schedule, particularly the times and durations of noisy construction activities. The community strategy will also provide a 24-hour contact number for the BEAR Scotland Control Room.
- Given the proximity of commercial development to the scheme extents, Toolbox Talk TTN-042 Being a Good Neighbour will be briefed prior to works commencing.
- Construction lighting will consider 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 road users of the road closure and diversion. Signage will be installed at least seven days in advance of the road closure.
- 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 carriageway resurfacing, 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 chemicals, fuels or by mobilisation in surface water caused by rain) during works have the potential to have a direct or indirect effect on Drain 1 and surrounding waterbodies.

However, no 'in-water' works are required and all land outwith the trunk road boundary is considered out-of-bounds to all construction staff during the works. The potential for a direct pollution incident within a waterbody is also unlikely as there are no watercourses within, spanned by or culverted beneath the scheme extents. Experience gained from BEAR Scotland maintenance schemes elsewhere on the network has shown that where standard best working practice is adopted (e.g., adherence to SEPA GPPs or PPGs, utilisation of drain covers or similar, etc.), water quality is protected.

Considering the nature of the scheme, it is expected that improvements will be made to the road drainage and water environment.

Road drainage and water environment mitigation measures:

- If any works are identified that would require entering Drain 1, 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 Drain 1 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 and Drain 1, 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 and Drain 1, 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 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 and waterbodies) 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.

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 of the scheme, and the mitigation detailed below, the risk of significant impacts to climate are considered to be negligible adverse in magnitude.

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

Proposed climate mitigation measures:

- Local contractors and suppliers will be used as far as practicable to reduce fuel use and greenhouse gas 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 M80 within the scheme extents upon completion of the works.

Works are restricted to areas of made/engineered ground within the boundary of the M80 carriageway, with access to the scheme gained via the M80. TM is currently anticipated to be a combination of lane closures and slip road closures. There are no pedestrian or other NMU facilities with direct connectivity to the scheme extents. As such, the proposed works impacts on the road traffic accidents is 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 risks 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 area anticipated with any other developments in the vicinity. Any future BEAR Scotland schemes will be programmed to take into account already-programmed works and as such, any cumulative effect will be limited.

An online search of the [Scottish Road Works Commissioner](#) records that there are no additional works occurring within 300m of the scheme that coincide with the timing of the scheme.

A search using [Stirling Council 'Simple Search' for Planning](#) identified that there are four planning applications within 300m of the scheme extents (Table 1).

Table 1: Planning Applications in Last 2 Years

| Reference    | Proposal  | Status                   |
|--------------|---|--------------------------|
| 22/00254/FUL | 60 no. allotment plots including access road, parking, communal area, fences and associated plot structures sheds | Approved with Conditions |
| 22/00631/ADV | 1 no. non-illuminated hoarding sign   | Approved                 |
| PAN-2023-008 | Proposed installation of a Photovoltaic ("PV") Solar Array  | Granted                  |
| 23/00278/FUL | Erection of extension to existing agricultural shed including PV panels and mobile field shelter                  | Approved with Conditions |

While it is not possible to gain an understanding on the timing or duration of the above granted 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 resurfacing works, given the small scale nature of the planning applications, which relate to an extension, allotments, solar panels and a sign coupled with the minor nature of the BEAR Scotland resurfacing works over the course of two nights, no in-combination effects are expected.

## 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 road surface, with all works restricted to made ground on the M80 carriageway surface.
- Works are not expected to result in significant disturbance to protected species that may be present in the wider area. No in-combination effects have been identified.
- The risk of major accidents or disasters is considered to be low.
- Removing the carriageway defects will provide this section of the M80 with another life cycles and will improve the ride quality of the road 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 not situated within 2km of, and does not share connectivity with, a 'sensitive area' designated for biodiversity features e.g., SAC, SPA, Ramsar, SSSI etc.

- The scheme will not have any impact on the Inventory Battlefields Battle of Sauchieburn and the Battle of Bannockburn.
- 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 does not lie within any sites designated for geology and soils.
- The majority of 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 two nights to complete on a rolling programme, with the aim being to complete the noisiest works by 23:00.
- With good practice pollution prevention measures implemented onsite, there is a negligible risk of a pollution event e.g., compliance with the SEMP.

## Annex A

“sensitive area” means any of the following:

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



**TRANSPORT  
SCOTLAND**

CÒMHDHAIL ALBA

© Crown copyright 2024

You may re-use this information (excluding logos and images) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence, visit <http://www.nationalarchives.gov.uk/doc/open-government-licence> or e-mail: [psi@nationalarchives.gsi.gov.uk](mailto:psi@nationalarchives.gsi.gov.uk)

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

Further copies of this document are available, on request, in audio and visual formats and in community languages. Any enquiries regarding this document / publication should be sent to us at [info@transport.gov.scot](mailto:info@transport.gov.scot)

This document is also available on the Transport Scotland website: [www.transport.gov.scot](http://www.transport.gov.scot)

Published by Transport Scotland, April 2024

Follow us:



**transport.gov.scot**



**Scottish Government  
Riaghaltas na h-Alba  
gov.scot**