



**TRANSPORT
SCOTLAND**

CÒMHDHAIL ALBA

transport.gov.scot

Environmental Impact Assessment Record of Determination

M9 Forth (Joints)

Contents

Project Details	3
Description.....	3
Location	3
Description of local environment.....	5
Air quality	5
Cultural heritage	6
Landscape and visual effects	6
Biodiversity	8
Geology and soils	9
Material assets and waste	10
Noise and vibration	11
Population and human health	11
Road drainage and the water environment.....	12
Climate	12
Policies and plans	13
Description of main environmental impacts and proposed mitigation	14
Air quality	14
Landscape and visual effects	15
Biodiversity	15
Material assets and waste	18
Noise and vibration	19
Population and human health	20
Road drainage and the water environment.....	21
Climate	23
Vulnerability of the project to risks	24
Assessment of cumulative effects.....	24
Assessments of the environmental effects	25
Statement of case in support of a Determination that a statutory EIA is not required.....	25
References of supporting documentation	26
Annex A.....	27

Project Details

Description

BEAR Scotland has been commissioned by Transport Scotland to carry out joint replacement and resurfacing works on the M9 Forth Bridge. The works will consist of expansion joint replacement and carriageway resurfacing 15m either side of both expansion joints for a length of approx. 135m (0.6ha).

Construction activities for the works are as follows:

- Set up traffic management (TM) and mark out site.
- Breakout and remove the existing expansion joints.
- Road to be planed for 15m either side of both joints.
- Install new joints.
- Resurface the carriageway 15m either side of both joints.
- Tidy site, remove TM and open road.

The works are programmed to be completed within the 2026/2027 financial year with works expected to begin on 15th September 2026. Works will be undertaken over 30 nights (20:30-06:00). Traffic Management (TM) is currently programmed to be in the form of alternating lane closures of the M9 as well as full overnight closures with a signed diversion. The diversion route will be confirmed following contractor approval.

Location

The scheme lies on the M9 Forth Bridge to the northwest of Stirling within the Stirling Council area and is surrounded by business premises and arable land (Figure 1).



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

Description of local environment

Air quality

Receptors – refer to ‘Population and Human Health’.

A search of the [Air Quality in Scotland](#) online mapping tool records show air quality monitoring sites in the wider area with bandings in the ‘green zone’ (Low Index 1-3).

The M9 Forth Bridge lies within the boundary of Stirling Council, which currently has no [Air Quality Management Areas](#) (AQMAs) within its administrative boundary. The nearest AQMA, ‘Falkirk Town Centre’, lies within the boundary of Falkirk Council approx. 18.8km southeast of the scheme extents (at its nearest point) and has been declared for nitrogen dioxide (NO₂) and particulate matter (PM₁₀).

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

- ‘Scotbeef Ltd, Longleys Farm, Bridge of Allan’ – animal and vegetable products for the food and beverage sector, declared for hydrofluorocarbons (located approx. 1.8km northeast).
- ‘UCP, Bridge of Allan, Stirling’ – other activities, declared for HFCs (located approx. 2km north).
- ‘Stirling STW, 29 Whitehouse Road, Stirling’ – waste and waste-water management, declared for methane (located approx. 3.65km south east).
- ‘Superglass Insulations Ltd, Stirling’ – mineral industry, declared for ammonia, carbon dioxide, formaldehyde, NMVOCs, and phenols (located approx. 3.8km southeast).
- ‘Cambusview Poultry Unit, Cambus, Alloa’ – intensive livestock production and aquaculture, declared for ammonia, particulate matter (located approx. 6.4km east).
- ‘Station Road, Cowie’ – paper and wood production and processing, declared for antimony, arsenic, cadmium, carbon dioxide, carbon monoxide, chromium, copper, dioxins and furans, formaldehyde, lead, manganese, mercury, nickel, nitrogen oxides, non-methane volatile organic compounds and particulate matter (located approx. 8.8km southeast).
- ‘Cowiehall Quarry, Stirling’ – mineral industry, declared for particulate matter (located approx. 9km northeast).
- ‘Bakelite Synthetics UK Ltd, Cowie’ – chemical industry, declared for formaldehyde (located approx. 9.2km southeast).

The baseline air quality within the scheme extents is primarily influenced by motor vehicles travelling along the M9 trunk road. Secondary sources are derived from vehicles travelling along nearby local network roads and day-to-day agricultural land management activities.

Cultural heritage

According to the [PastMap](#) and [Historic Environment Scotland](#) (HES) online mapping tool, there are no designated cultural heritage assets located within 300m of the scheme extents.

There are approx. 11 undesignated cultural heritage assets located within 300m of the scheme extents. The nearest record pertains to 'Old Mills Farm Motorway Bridge' National Record of the Historic Environment (NRHE) (ID: 187107) which the scheme extents are located within.

Construction of the M9 carriageway is likely to have removed any archaeological remains that may have been present within the carriageway boundary. The potential for the presence of unknown archaeological remains in the study area has therefore been assessed to be low.

Given the restriction of the works to the M9 Forth Bridge and that there are no designated cultural heritage assets located within 300m of the works, local cultural heritage is unlikely to be affected by the proposed joint replacement and resurfacing works. As such, 'Cultural Heritage' has been scoped out of further environmental assessment.

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 scheme extents is 'Carselands' (no. 153) ([Scottish Landscape Character Types](#)). The key characteristics of which are:

- Flat, open, large scale Carselands of predominantly open agricultural landcover forming the floor and former floodplains of the River Forth, River Devon and Black Devon.
- Important landscape setting of Stirling, Stirling Castle, and the Ochil Hills.
- Absence of settlement across the Carselands, restricted to villages on the peripheral slopes and scattered farmsteads along the valley floors.
- Periodic extensive flooding continues to influence land use.

- Trunk roads run in parallel to the northern and southern perimeters of the Carselands.
- Distinct character of group of Hillfoot villages, and their relationship with streams issuing from Ochil Hills within Lower Devon area, as well as major overhead power lines and their pylons.
- Recent expansion of settlement boundaries at edge of carse making new development very visible.
- Industrial and agricultural buildings, and bonded warehouse on open carseland prominent in views within Lower Devon area.
- Largest remaining intact raised bog in Britain at Flanders Moss, with integration importance for nature conservation.
- Importance of Carse of Forth open farmland for flocks of wintering geese.
- Open views across carse accentuated by consequent dramatic contrast with the adjacent escarpments of the Ochil and Fintry, Gargunnock and Touch Hills.

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

- Motorway and major roads.
- Freshwater area.
- Rectilinear fields and farms.
- Plantation.
- Rough grazing.
- Industrial or commercial area.

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.

There is one area of woodland registered on the [Native Woodland Survey of Scotland](#) database located within 300m of the scheme extents:

- Approx. 0.8ha of wet woodland, located approx. 80m southwest of the scheme extents.

In addition to the above, the following woodlands are located within 300m of the scheme extents:

- Approx. 1.6ha of broadleaved woodland, located approx. 20m west from the southern end of the scheme extents.

- Approx. 1.5ha of conifer woodland, located approx. 75m southwest of the scheme extents.

There are no areas of woodland registered on the [Ancient Woodland Inventory Scotland](#) database and no trees covered by a Tree Preservation Order (TPO) located within 300m of 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 River Teith Special Area of Conservation (SAC) is spanned by the M9 Forth Bridge. No other European sites e.g., Special Protection Areas, SACs, or Ramsar Sites are located within 2km of the scheme extents.

While not situated within 2km of the works, the Firth of Forth SPA and Ramsar Site lies approx. 8.8km east of the M9 Forth Bridge and also shares hydrological connectivity with the scheme. In addition, the scheme extents also lie within the buffer zone for several of the qualifying species of the South Tayside Goose Roosts SPA and Ramsar Site.

The Firth of Forth Site of Special Scientific Interest (SSSI) (component of the SPA) shares hydrological connectivity with the scheme extents and lies approx. 8.8km east of the scheme extents (straight line distance, at its nearest point).

The Carsebreck and Rhynd Lochs SSSI (component of the SPA) lies approx. 15.2km northeast of the scheme extents (straight line distance, at its nearest point).

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

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

Three invasive non-native species (INNS):

- Giant hogweed (*Heracleum mantegazzianum*).

- Himalayan balsam (*Impatiens glandulifera*).
- Japanese knotweed (*Reynoutria japonica*).

Three injurious weeds:

- Broad-leaved dock (*Rumex obtusifolius*).
- Common ragwort (*Senecio jacobaea*).
- Creeping thistle (*Cirsium arvense*).

The nearest record pertains to giant hogweed and lies approx. 0.26km southeast of the scheme extents (recorded in 2016). No invasive native perennials were recorded within 2km of the scheme extents (in the last 10-years).

A search of the Asset Management Performance System (AMPS) online mapping tool records no INNS, injurious weeds, or invasive native perennials within the verge of the M9 carriageway boundary within the scheme extents (in the last 10-years).

The habitat immediately bordering the M9 carriageway consists primarily of mature broadleaved woodland, arable land, mature hedgerows, natural roadside vegetation (e.g., immature trees, shrubs, scrub, etc.), and made verges which undergo cyclic maintenance (e.g., grass-cutting, weed control, etc.). While there is a high availability of roadside vegetation along the M9, the habitat immediately bordering the carriageway is of reduced ecological value, due to the likelihood of disturbances from fast-flowing traffic. The presence of the M9 carriageway also limits the connectivity and continuity for species between their potential habitats on either side of the carriageway.

Ecological surveys have been undertaken at the M9 Forth Bridge in April 2021, July 2022, August 2025 and June 2026.

During these surveys extensive areas of INNS Himalayan balsam have been identified along the banks of River Forth including in proximity to the bridge. As of June 2026, when the last ECS was conducted, Himalayan balsam is still present at this location.

Geology and soils

The M9 within the scheme extents is not located within a [Geological Conservation Review Site](#) (GCRS) and there are no [Local Geodiversity Sites](#) (LGS) located within 300m of the scheme extents.

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

- Alluvial soils.

There is one major soil group recorded within the scheme extents:

- Alluvial soils.

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

- Reclaimed Intertidal Deposits – Silt and Clay.

The bedrock geology within the scheme extents is recorded as:

- Sheriffmuir Sandstone Member – Sandstone.

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.

Given the restriction of the works to the M9 carriageway and the lack of any excavation works, local geology and soils are unlikely to be affected by the proposed resurfacing works. As such, 'Geology and Soils' has been scoped out of further environmental assessment.

Material assets and waste

The proposed works are required to replace the expansion joints and resurface part of the M9 carriageway on the River Forth Bridge. Materials used will consist of:

- Thormajoint BJ2000 – for APJ
- Freyssinet Multiflex – Type 5 “Mat” Joint
- Sentinel Nosing Mortar – Mat Joint Bedding
- Safetreack IRR – Mat Joint Gap Infill
- Hilti HIT -HY 170 – Mat Joint
- METSET Structural Adhesive – Mat Joint
- Fischer EM – Mat Joint
- Tigiepox To1 – Mat Joint
- TS 2010 – Surfacing
- Ready Mix Concrete – Deck Repairs (if required)

The scheme has a value of less than £350,000. As a result, a Site Waste Management Plan (SWMP) is not required.

The scheme involves removal of the existing expansion joints and removal of the surface course. The main waste produced during the works will be the existing deteriorated joints and road planings (bituminous materials) (approx. tonnage to be confirmed by Contractor), which 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 Quiet Areas](#) (CQA).

The night-time modelled noise level ([LNGT](#)) within the scheme extents ranges between 75 and 80 decibels (dB), with levels dropping to between 65 and 70 dB at the nearest noise sensitive receptor (NSR) (business premises).

Baseline noise and vibration in the study area is mainly influenced by vehicles traveling along the M9 trunk road. Secondary sources are derived from vehicles travelling along nearby local network roads, day-to-day woodland and agricultural land management activities.

Population and human health

There are a small number of business premises located within 300m of the scheme extents, however there are no residential properties. The nearest residential property is located 470m east of the scheme and is fully screened by intervening topography. Several of the business premises have reduced screening from the scheme extents, while others are screened by a mix of intervening topography and/or other properties.

In addition, the following is located within 300m of the scheme extents:

- 'Little Stars Nursery' – located approx. 255m east of the scheme extents. This nursery is screened from the scheme by intervening topography and/or other properties.

One local footpath passes below the southern extent of the M9 Forth Bridge, with a core path (ID: 434) spanning the River Forth approx. 45m east. There are no other non-motorised user or community facilities with connectivity to the scheme extents and street lighting is absent.

The M9, within the scheme extents, is a dual carriageway with a speed limit of 70 mph applying throughout. The Average Daily Traffic (ADT) flow is high (37,259 motor vehicles (ID: JTC00068, 2026 data)) ([Drakewell Traffic Data](#)).

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:

- 'River Forth (below River Teith confluence)' (ID: 4700), which flows directly beneath the southern end of the scheme extents. It is within the River Forth catchment of the Scotland river basin district with the main stem being approx. 5.7km in length and has been classified as 'moderate'.

There are no unclassified waterbodies, considered to be a minor tributary or drainage channels, located within 300m of the scheme extents.

A search of the [SEPA's Flood Map](#) online mapping tool records that the M9 River Forth bridge is not at risk of surface water flooding however, the River Forth is noted as being at high risk of flooding (e.g., river has a 10% chance of flooding each each).

A search of the [Scotland's Environment](#) (SE) online mapping tool determined that the trunk road, within the scheme extents, lies on the 'Callander' and 'Teith and Forth Valleys' groundwaters, which have both been classified as 'Good'.

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

Climate

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

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

annual average levels of emissions. These recommendations are based on an ambitious but credible route to Net Zero for Scotland by 2045.

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

Transport is the largest contributor to harmful climate emissions in Scotland. In response to the climate emergency, Transport Scotland are committed to reducing their emissions by 75% by 2030 and to the above noted legally binding target of net-zero by 2045. Transport Scotland is committed to reducing carbon across Scotland's transport network and this commitment is being enacted through the Mission Zero for Transport ([Mission Zero for transport | Transport Scotland](#)).

Policies and plans

This Record of Determination has been undertaken in accordance with all relevant regulations, guidance, policies and plans, notably including the Environment and Sustainability Discipline of the Design Manual for Roads and Bridges ([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 and vehicles which will contribute to local dust and air pollutants. The main sources are likely to be dust generated by joint removal and excavation of the 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 not significant.

Upon completion of the works, no residual air quality impacts are anticipated.

Air quality mitigation measures:

- A water-assisted dust sweeper will sweep the carriageway after dust-generating activities, and waste will be contained and removed from site as soon as is practicable.
- Materials that have a potential to produce dust will be removed from site as soon as possible.
- Wherever possible, ancillary plant and vehicles will be shut down.
- All ancillary plant and vehicles will have been regularly maintained, paying attention to the integrity of exhaust systems.
- Ancillary plant and vehicles will be switched off when stationary to prevent exhaust emissions (e.g., there will be no idling vehicles).
- Where practicable, if powered generators are required, the use of mains electricity ancillary plant will be considered in place of diesel or petrol alternatives.
- 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 site as a result of the presence of construction plant, vehicles, and TM. However, people, ancillary plant, vehicles, and materials are restricted to areas of made/engineered ground on the M9 Forth Bridge, and construction works are programmed to be undertaken at night (28 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 not significant.

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 minor visual changes to the bridge and a renewed road surface being the only discernible changes.

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 it 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

The works are located directly above the River Teith SAC, share hydrological connectivity to the Firth of Forth SPA and Ramsar Site and are located within the buffer zone for qualifying features of the South of Tayside Goose Roosts SPA and Ramsar Site. As such, a Habitat Regulations Appraisal was undertaken which ruled out Likely Significant Effects (LSE) to the Firth of Forth SPA and Ramsar Site and the South of Tayside Goose Roosts SPA and Ramsar Site, given the restriction of the works to the bridge deck, the distance to the designated site and best practice

pollution prevention measures being implemented as standard. However, LSE could not be ruled out for the River Teith SAC and as such, the HRA moved to the Appropriate Assessment stage which concluded that following the implementation of mitigation measures (all of which are listed below, such as lighting being positioned to avoid the River Forth), the works would not result in an adverse effect on site integrity (AESI) to any of the qualifying features of the River Teith SAC.

The works will result in a temporary short-term increase in noise levels which 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 and vehicles which will emit noise and create potential disturbance. The works will also require delivery of materials and the presence of personnel to facilitate the improvements to the bridge and road surface. However, the number of construction vehicles and construction operatives required on site 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 M9, and the scheme is of limited duration (28 nights). The potential for significant species disturbance within the area of likely construction disturbance is therefore somewhat diminished.

Although not recorded directly within the scheme extents, Himalayan balsam, an INNS, has been identified along the banks edge of the River Forth. However, all works will be restricted to joint replacement and resurfacing of the existing M9 Forth Bridge, and as such, providing the mitigation detailed below is adhered to, the potential to spread or introduce INNS, invasive native perennials, or injurious flowering plant species is 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 not significant.

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

Biodiversity mitigation measures:

- All site personnel will be made aware of the location, sensitivity and protected status of the River Teith SAC.
- 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., River Forth etc.) to ensure minimal impact on nocturnal species.
- Site operatives will remain vigilant for the presence of protected species within the working area. In the event they are identified within the road boundary or

associated verge during the works, all works will temporarily halt until such time that they have naturally dispersed.

- Given the records of a protected species within the scheme extents, Toolbox Talk TTN-139 'Protected Species' will be briefed to all staff prior to the commencement of works.
- The works are not permitted to disturb or destroy any active birds' nests. If an active bird's nest is identified onsite that will be impacted by works, BEAR Scotland's Environmental Team will be contacted.
- All site workers will have received adequate training relevant to their role prior to working on the site, including specific environmental inductions and 'toolbox talks' as required.
- Site personnel will remain vigilant for protected species and will not approach or touch any animals seen on site. Any sightings of protected species will be reported to BEAR's Environmental Team. Should a protected species be encountered or move within 50m of the active works, works will be temporarily halted until the animal(s) move at least 50m away from the construction site, or until BEAR's Environmental Team can provide advice.
- The Contractor will employ 'soft start' techniques for all noisy activity to avoid sudden and unexpected disturbance during works. Each time the activity is started up after a period of inactivity, the noise levels will be gradually increased over a period of 30 minutes to permit animals (including birds) to move away from the disturbance.
- All equipment stored onsite, if necessary, will be checked at the start of each workday to ensure mammal species are not present. Any storage containers/plant within the compound will also be secured overnight to prevent exploration by mammal species. Any areas where an animal could become trapped (e.g., storage containers) will also be covered at the end of each working day.
- People, ancillary plant, vehicles, 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 are to 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 not significant. Upon completion of the works, no residual impacts are anticipated on materials or waste.

Material assets and waste mitigation measures:

- The waste hierarchy (Reduce, Reuse, Recycle and Dispose) will be employed throughout the construction works.
- 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.
- Designated areas will be identified within which all materials and personnel, including construction compounds, where necessary, will be contained to limit

environmental disturbance during construction works. This will include a designated area (if required) for segregation and reuse of waste materials.

- The selection of areas for materials stockpiling will avoid sensitive locations such as road drainage. Stockpiled materials with leachate potential, for example, will be stored away from road drainage to prevent cross-contamination with other materials, wastes, or groundwater.
- Materials will be stored with the appropriate security to prevent loss, theft, or vandalism.
- All temporary road signs and traffic cones will be removed from site on completion of works.
- Wastewater from welfare facilities (if required) will be subject to effluent treatment followed by tanker removal.
- If hazardous substances are used onsite, each substance will be subject to assessment under the Control of Substances Hazardous to Health (COSHH) Regulations 2002. Hazardous substances will also be clearly labelled, and disposed of, in line with relevant waste regulations. Special waste will also not be mixed with general waste and/or other recyclables.

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 and vehicles for replacement of the existing joints and carriageway resurfacing within 15m. Noise will also be generated by using breakers (jackhammers), chipping hammers, and rollers, etc. As a result, there is potential for noise and vibration effects to residential properties within the local area.

However, the works are not located within a CQA, and the closest residential property is 470m away. While works will be undertaken over 28 nights, the aim will be to complete the noisiest works by 23:00.

The expansion joints are in a poor condition, with a series of defects. Replacing them will result in 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 severe impacts, disruption and/or complaints. The impacts from noise and vibration from the proposed scheme are therefore anticipated to be not significant.

Noise and vibration mitigation measures:

- The local authority environmental health department will be notified of nighttime working by BEAR Scotland's design engineer.
- Where possible, the noisiest work operations (e.g., cold milling, using breakers (jackhammers), chipping hammers, use of rollers, etc.) will be completed before 23:00.
- A 'soft start' technique will be employed for all noisy activity to avoid sudden and unexpected disturbance during works. Each time the activity is started up after a period of inactivity, the noise levels will be gradually increased over a period of 30 minutes to permit animals to move away from disturbance.
- 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 and vehicles 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 will be kept to a minimum to minimise noise when unloading.
- All ancillary plant and vehicles 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 and site vehicles will be switched to the minimum setting required by HSE and, where possible, will utilise 'broadband non-tonal' or 'directional sound reversing' alarms. Speed limits will also be reduced through the works.

Population and human health

During construction, activities undertaken on site have the potential to have temporary adverse impacts on local residents and road users. However, TM will only be in place for 28 nights (when traffic flows will be at a minimum), as such, no congestion issues are predicted during the proposed construction hours.

There is one local footpath which passes below the M9 River Forth Bridge and one core path spanning the River Forth approx. 45m east. However, all works will be confined to the M9 Forth Bridge and therefore will be separated from both footpaths.

Considering the nature, duration, size, and scale of the scheme, and with implementation of the mitigation described above, impacts on population and human health are assessed as not significant.

Upon completion of the works, there will be a beneficial impact in relation to population and human health due to the improvement of usability and safety provided by the new expansion joints and carriageway surface.

Population and human health mitigation measures:

- 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.
- 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 businesses informed of the proposed working schedule, particularly the times and durations of noisy construction activities. The communication strategy will also provide a 24-hour contact number for the BEAR Scotland Control Room.
- 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 'River Forth', which flows beneath the M9 carriageway.

However, the works will be restricted to the M9 Forth Bridge, and the potential for a direct/ indirect pollution incident to a waterbody is considered to be 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 not significant.

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

Road drainage and the water environment mitigation measures:

- All site operatives will be made aware of the proximity and sensitivity of the River Forth.
- No work has been identified that would require entering a waterbody. If such a need were identified onsite, BEAR Scotland's Environmental Team will be contacted (before works commence) to allow consideration of potential environmental effects.
- The abstraction or transfers of water from, discharges to, or the washing of tools in surface waterbodies will not be permitted.
- Appropriate mitigation measures (including debris netting / boarding) will be utilised to prevent debris and run-off from entering the River Forth below when deemed required.
- 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 protected (e.g., utilisation of drain covers or similar) to ensure full segregation of the works from the road drainage system. The Contractor will inspect these periodically to ensure that they have not been removed, damaged, or interfered with and they will be cleaned of silt and debris as necessary.
- 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, 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 Ale Water, 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 the River Forth, 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, 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, and fuels will also be stored in a manner that ensures they are protected from damage by collision or extremes of weather.

- Appropriate measures will be implemented during resurfacing operations to limit the potential for wastes (i.e. excavated carriageway) and materials (i.e. new asphalt) to enter any gullies present on site. On completion of resurfacing and reconstruction operations, any gullies present on site will be visually checked to ensure they have not become blocked as a result of the scheme.
- Regular visual pollution inspections of the designated laydown area and work site (particularly near road drainage entry points) will be conducted (e.g., site walkover by engineer or Site Supervisor), especially during periods of heavy rain.
- All vehicles 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, 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:

- Use of warm mix asphalt as standard.
- 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 M9 Forth Bridge upon completion of the works.

Works are restricted to areas of made ground on the M9 carriageway of the River Forth Bridge, with access to the scheme gained via the M9 mainline.

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 of cumulative effects

The proposed works are not anticipated to result in significant environmental effects. Due to the small-scale nature of the proposed works, no cumulative effects are 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.

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 M9 trunk road or surrounding roads in proximity to the scheme, which will be undertaken at the same time.

A search using [Stirling Council 'Simple Search'](#) identified that there is one planning application within 300m of the scheme extents:

- 25/00671/FUL – Change of use of land to form coach park (relocation of existing) and reconfiguration of existing car park and associated works at M&G, Kildean Business Park, Stirling, which has been decided and is located approx. 170m east of the scheme extents.

While it is not possible to gain an understanding on the timing or duration of the above planning application, it is considered that even in the event that the above planning application was being progressed at the same time as the planned BEAR

Scotland expansion joint replacement and carriageway resurfacing works, given the small-scale nature of the planning application located in close proximity, no in-combination effects are anticipated.

Assessments of the environmental effects

The M9 Forth Expansion Joint Replacement scheme lies directly above the River Teith SAC and as such, a HRA has been undertaken. The HRA has assessed that there is sufficient information to conclude that the proposed scheme, with the implementation of mitigation, will not result in any AESI to the River Teith SAC.

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

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

This is a relevant project in terms of section 55A(16) of the Roads (Scotland) Act 1984 as it is a project for the improvement of a road and the completed works (together with any area occupied by apparatus, equipment, machinery, materials, plant, spoil heaps, or other such facilities or stores required during the period of construction) are situated in whole or in part in the River Teith SAC which is a sensitive area within the meaning of regulation 2(1) of the Environmental Impact Assessment (Scotland) Regulations 1999.

The project has been subject to screening using the Annex III criteria to determine whether a formal Environmental Impact Assessment is required under the Roads (Scotland) Act 1984 (as amended by The Roads (Scotland) Act 1984 (Environmental Impact Assessment) Regulations 2017). Screening using Annex III criteria, reference to consultations undertaken and review of available information has not identified the need for a statutory EIA.

The project will not have significant effects on the environment by virtue of factors such as:

Characteristics of the scheme:

- Works are restricted to like-for-like replacement of expansion joints and worn/damaged road surface, with all works restricted to made ground on the M9 carriageway surface on the Forth Bridge.
- 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 replacing the deteriorated joints, this section of the M9 carriageway will be provided 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 works are located above the River Teith SAC. However, a HRA has been undertaken which has confirmed that the works will not result in AESI on the qualifying features of the SAC.
- The scheme does not lie within any sites of historical, cultural, or archaeological interest.
- 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 or soils.
- 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 30 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.

References of supporting documentation

M9 Forth Expansion Joint Replacement Habitat Regulations Appraisal (Produced by BEAR Scotland)

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 2026

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](#).

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.

Published by Transport Scotland, September 2026

Follow us:



transcotland



@transcotland

transport.gov.scot