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Environmental Impact Assessment Record of Determination

A9 River Braan – Expansion Joint Replacement

Contents

Project Details

Description

BEAR Scotland has been commissioned by Transport Scotland to carry out replacement of both uplink and downlink expansion joints for asphaltic plug joints on the A9 River Braan bridge. This will include the partial removal (cutting) of embedded metal plates at the downlink joint. Following the removal of embedded metal, the bridge deck surface will be locally reinstated using a rapid-cure concrete product to provide a flat and even bond surface for the new expansion joint.

Joint replacements will be carried out in conjunction with approximately 60m of re-surfacing inlay works (15m on uplink, downlink approaches of each joint). This is to fix longitudinal falls and improve surface drainage.

Concrete repairs above the downlink bearing shelf will also be carried out with access via the pedestrian underpass. A damaged kerb-edge gully top will be replaced.

Minor excavation of the road surface on the bridge deck will be required with the removal of the existing expansion joints.

The total length of the scheme is 100m with an approximate area of 0.01ha.

The main plant will include pavers, excavators, road saw and rollers. A welfare unit will be located within on the A9 within the traffic management (TM) setting.

The works are programmed to be completed within the 2024/2025 financial year, currently aiming for commencement in March 2025, however this is subject to change. Works will be undertaken during day-time hours (07:00-19:00) with potential of 24-hour working over the duration of up to 3 weeks.

Traffic Management (TM) will consist of a single lane closure with 2-way temporary traffic lights (TTLs) and a 10mph convoy working during the joint replacement works. Temporary closure of the downlink pedestrian underpass will be required to allow concrete repairs at the downlink bearing shelf. Access to junctions and private roads will be maintained. If the programme changes, this may result in amendments to the exact TM requirements.

Location

The scheme is located on the A9 River Braan bridge, northwest periphery of Dunkeld in the Perth and Kinross council area (Figure 1). The National Grid Reference (NGR) of the A9 River Braan bridge NO 02302 42183 (centred).

Figure 1. Scheme Location

Description of local environment

Air quality

Properties within 300m of the scheme – refer to 'Population and Human Health'.

The scheme does not fall within any Air Quality Management Areas (AQMA) declared by Perth and Kinross Council.

The nearest air quality monitoring station to the scheme lies 20km southeast and records air quality to be within the 'green zone' (Low Index 1-3).

There are no Scottish Pollutant Release Inventory (SPRI) monitoring sites located within 10km of the scheme.

Baseline air quality for this scheme is primarily influenced by traffic along the A9 trunk road. Secondary sources are likely derived from urban activities associated within the nearby villages of Dunkeld and Inver. Railway movements on the 'Perth to Inverness' line (approximately 140m south of the scheme) will also have an impact on the local air quality.

Vehicle count data taken from the nearest count point on the A9 (located approximately 5km north of the bridge) shows an Average Annual Daily Traffic (AADT) count of 15,286 motor vehicles, with a HGV percentage of approximately 11% (count data taken in 2023) (Department for Transport).

Cultural heritage

A search of PastMap mapping tool (PastMap) identified the following cultural heritage features within 300m of the scheme:

- Scheduled Monument 'Dunkeld Cathedral' (SM90119) lies 295m north of the scheme.
- Category C Listed Building, 'Manse, Little Dunkeld' (LB11164) lies 280m northeast of the scheme.
- 'Dunkeld' Conservation Area lies 230m north of the scheme.
- 'Battle of Dunkeld' Battlefield (BTL32) lies 295m north of the scheme.
- 'Dunkeld' House Garden & Designed Landscape (GDL00157) lies 295m north of the scheme.
- Numerous Historic Environment Records (HERs) and records in Canmore database. The nearest of these, 'Ladywell' (MPK6534) is a record of a linear feature which lies 220m southeast of the scheme.

There are no records of World Heritage Sites within 300m of the scheme extents (PastMap).

Works will be restricted to previously engineered ground within a modern bridge on the A9 trunk road. Therefore, this receptor has no constraints that are likely to be impacted by the proposed works and as such, 'cultural heritage' is scoped out and is not discussed further within this RoD.

Landscape and visual effects

The scheme lies within the River Tay (Dunkeld) National Scenic Area (NSA) (SiteLink). The NSA has the following special general qualities:

- The beauty of cultural landscapes accompanying natural grandeur
- The 'Gateway to the Highlands'
- Characterful rivers, waterfalls and kettle-hole lochs
- Exceptionally rich, varied and beautiful woodlands
- The picturesque cathedral town of Dunkeld
- Drama of The Falls of Braan and The Hermitage
- Dunkeld House policies
- Significant specimen trees
- The iconic view from King's Seat

The scheme is not situated within a National Park (NP) (SiteLink).

The Landscape Character Type (LCT) within the scheme extent is recorded as Lower Upland Glens (LCT No. 372). The key characteristics of this LCT are:

- Lower sections of the principal glens north of the Highland Boundary Fault.
- Larger scale landscapes than the mid and upper reaches of these glen, which are generally wider with broader floodplains.
- Combinations of upland and lowland attributes, with evidence of glaciation, but lacking many of the classic glacial features, such as corries, hanging valleys and misfit rivers, found higher up.
- Broad floodplains, often with meandering rivers, interspersed with narrower, gorgelike sections where harder rocks cross the glens.
- The most settled parts of the glens, with transport corridors housing main roads and railways, large towns, castles, fortified manor houses, historic estates and estate villages.
- Modern expansion of larger settlements, with pockets of smaller housing development out of the main settlements.
- Fertile farmland on valley floor and valley slopes with large fields separated by hedgerows with tree lines, woodland belts and post and wire fences.

- Substantial and varied woodland cover - broadleaf woodlands clothing steeper slopes, around estate properties and along rivers, with conifer forests on valley sides and associated with estates
- Influence of large estates, castles and Victorian development, with their historic buildings and parkland.
- Corridor views along the valley.

The land use in proximity to the scheme is dominated by woodland and urban development with Dunkeld located immediately east and the hamlet of Inver located to the west.

The A9 Trunk Road connects Perth with Thurso. It commences immediately north of Inveralmond Roundabout in Perth leading generally northwards for a distance of 357 kilometres to its junction with an unclassified road leading to Holborn Head lighthouse at Scrabster. The A9 is a mixture of single carriageway, '2+1' carriageway, and stretches of two-lane dual carriageway. The A9 at the scheme extent is a single carriageway bridge over the River Braan.

Biodiversity

River Tay Special Area of Conservation (SAC) (NatureScot Site Code: 8366) encompasses the River Braan which is spanned by the A9 River Braan bridge.

Due to proximity and ecological connectivity of the works to the River Tay SAC, a Habitats Regulations Appraisal (HRA) has been produced. Refer to the relevant assessment section below for details.

No sites of national importance designated for nature conservation are located within 300m of the scheme extents (SiteLink).

The NBN Atlas holds the following records of invasive and injurious plants (as listed in the NMC Contract) using the same search criteria:

- Creeping thistle (*Cirsium arvense*)
- Common ragwort *(Jacobaea vulgaris)*
- Broad-leaved dock (*Rumex obtusifolius*)
- Himalayan balsam *(Impatiens glandulifera)**
- Japanese knotweed *(Fallopia japonica)**

*Invasive non-native species (INNS) as listed in the NMC Contract.

Transport Scotland's Asset Management Performance System (AMPS) holds one record of Japanese knotweed within the A9 verge at the scheme extents.

The habitat in proximity to the scheme is dominated by woodland, which is present along the banks of the River Braan and urban development within the area. Freshwater habitat is provided by the River Braan, which is spanned by the A9 River Braan bridge and the River Tay, in which the River Braan discharges 190m north of the scheme.

There is no woodland listed on the Ancient Woodland Inventory (AWI) (Scotland's Environment) within the scheme extents. Woodland listed on the AWI as 'ancient' (of semi natural origin) lies 50m south of the scheme.

There are no trees covered by the Tree Preservation Orders (TPOs) within 300m of the scheme (Perth and Kinross Council).

A range of ecological surveys were completed for previous work packages on A9 River Braan bridge by ecologist, Jenny Wallace Ecology Ltd, and by the BEAR Scotland NW Environment team.

Geology and soils

The scheme does not lie within a Geological Conservation Review Site (GCRS), or a geologically designated Site of Special Scientific Interest (SSSI) (NatureScot Sitelink).

Superficial deposit within the scheme extents is comprised of Alluvium (clay, silt, sand and gravel.), which is a sedimentary superficial deposit (BGS Geology Viewer).

Bedrock within the scheme extent is comprised of Southern Highland Group (semipelite and psammite) which is a metamorphic bedrock (BGS Geology Viewer).

The major soil groups found within the scheme are mineral podzols (Scotland's Soils).

Soils within the scheme extent are recorded as being 'Class 0', as displayed on Scotland's Peat Map. Class 0 is considered to be mineral soil, and peatland habitats are not typically found on such soils.

This receptor has no constraints (as identified in Environmental Baseline) that are likely to be impacted by the proposed works, which are restricted to the A9 River Braan bridge and will not entail groundworks outside of the carriageway boundary. As such, 'geology and soils' is scoped out and is not discussed further within this RoD.

Material assets and waste

The proposed works are necessary to replace severely damaged bridge joints on the A9 River Braan bridge. A range of plant and machinery will be utilised during the works, consisting of road planer, steam roller, excavator, road saw, stihl saw, handheld breaker, petrol generators, handheld coring rig, water-pressure washer, hydro-demolition plant, bitumen boiler, compressor and hot flame lance.

Materials used will consist of carriageway surfacing course, proprietary concrete, formwork plywood, replacement gully top, drainage channels, Asphaltic Plug Joint (APJ) hot flexible material, APJ aggregate and anti-skid scatter.

Wastes are anticipated to be road planings, removed expansion joint material, removed metal plates, damaged gully top and removed defective concrete.

Road plannings will be recovered for re-use in line with BEAR Scotland's Procedure 126: The Production of Fully Recovered Asphalt Road Planings. The Contractor is responsible for the disposal of road planings and this will be 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. Any waste kerbing/drainage components will be removed off site for disposal.

The Scheme is valued at £100,000, and as such a site waste management plan (SWMP) is not required. Coal tar or asbestos materials have not been highlighted as being present during the investigation works. It is not expected that there will be patches of asbestos still present within the bridge waterproofing system, however if present all asbestos contaminated material will be disposed of appropriately.

Noise and vibration

For residential, community and commercial receptors refer to the 'Population and Human Health' section below.

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

Noise modelled data from Environmental Noise Directive (END) Round 4 Noise Mapping indicates 24 hour annual average noise level (Lden) between 70 and 80dB at the scheme location (SpatialData).

The baseline noise and vibration in the scheme extents is primarily influenced by vehicles travelling along the A9 trunk road. Secondary sources are likely derived from urban activities associated with the nearby settlements of Dunkeld and Inver.

Railway movements on the 'Perth to Inverness' line approximately 140m south of the scheme will also have an impact on the local noise levels.

Population and human health

The scheme extent lies on the periphery of Dunkeld with the hamlet of Inver located west of the scheme. Properties closest to the scheme are business premises with the construction company 'Dunkeld Builders Ltd' lying 20m southeast of the scheme. Residential premises and recreational premises (Birnam Highland Games Park and a caravan holiday park) lie further afield and are screened by at least 40m of dense woodland belts.

There are no pedestrian facilities on the A9 River Braan bridge deck. A pedestrian underpass lies under the A9 River Braan bridge deck adjacent to the right bank bridge parapet. Core paths lie either side of the River Braan under the bridge deck (Scotland's Environment). Two walking routes 'Fiddler's Path, Dunkeld' and 'Inver Walk and Pine Cone Point, Dunkeld' as noted by WalkHighlands, lie either side of the River Braan below the A9 River Braan bridge deck.

There are no National Cycle Network Routes (OS Maps) within 300m of the scheme.

Traffic Management will involve a single lane closure with 2-way temporary traffic lights (TTLs). A 10mph convoy will be required during joint replacement works. Temporary closure of the downlink pedestrian underpass will be required to allow concrete repairs at the downlink bearing shelf.

Road drainage and the water environment

The A9 River Braan bridge spans the River Braan (ID: 6576) at the scheme extents. The River Braan is a river within the River Tay catchment and has been classified by the Scottish Environment Protection Agency (SEPA) under the Water Framework Directive 2000/60/EC (WFD) as having a condition of 'good' in 2023 (Water Classification Hub).

The River Braan discharges into the River Tay (R Tummel to R Isla Confluences) (ID: 6499) 190m north of the scheme. The River Tay has been classified by SEPA and assigned a condition of 'poor ecological potential' in 2023 (Water Classification Hub).

Several minor watercourses and drains lie within 300m of the scheme.

The scheme is underlain by both the 'Killin, Aberfeldy and Angus Glens' and 'Tummel and Tay Sand and Gravel' groundwater bodies; both of which are in 'good' condition (Water Classification Hub).

A search of the SEPA Flood Map did not highlight road surface flooding on the A9 at the scheme extents. The banks of the River Braan spanned by the bridge have high risk (10% each year) of fluvial flooding each year.

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 included a target of reducing CO_2 emissions by 80% before 2050 (from the baseline year 1990). The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 amended the Climate Change (Scotland) Act 2009 to bring the target of reaching net-zero emissions in Scotland forward to 2045 (Climate Change (Emissions Reduction Targets) (Scotland) Act 2019).

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

Construction activities associated with the proposed works have the potential to temporarily cause local air quality impacts. The main sources are likely to be dust generated by excavation of the road surface, as well as exhaust emissions from ancillary plant and vehicles. As a result, there is potential for dust, particulate matter, and exhaust emissions to be emitted to the atmosphere. However, taking into account the nature and scale of the works and the following mitigation measures, the risk of significant impacts to the air are considered to be low.

- When not in use, plant and vehicles will be switched off; there will be no idling vehicles.
- All plant, machinery and vehicles associated with the works will be maintained in order to minimise emissions, as per manufacturing and legal requirements. No significant dust, particulate matter, and exhaust emissions sources will be introduced by the works.
- Green driving techniques will be adopted, and effective route preparation and planning to be undertaken prior to works.
- All delivery vehicles carrying material with dust potential will be covered when travelling to or leaving site, preventing the spread of dust beyond the work area.
- Activities involving cutting/planing will be appropriately managed to reduce the potential for dust creation. This will involve use of measures such as dampening down or on tool extraction where required.
- Material stockpiles will be reduced as far as is reasonably practicable by using a ‘just in time’ delivery system. All material will also be stored on made ground.
- Any stockpiled material on site will be monitored daily to ensure no risks of dust emissions exists.
- Materials will be removed from site as soon as is practicable.
- Good housekeeping will be employed throughout the work.
- Drop heights to haulage vehicles and onto conveyors will be minimised.
- Surfaces will be swept where loose material remains following planing.

With the above mitigation measures in place, it is anticipated that any air quality effects associated with the proposed works are unlikely to be significant. This receptor is not considered further in this RoD.

Landscape and visual effects

The works are located within the NSA; however, the works are like-for-like in nature, short-term and restricted to A9 River Braan bridge. Therefore, consultation with NatureScot regarding was not required.

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 this will be restricted to the limited construction duration only. Furthermore, the scheme is screened from the wider landscape by woodland and roadside tree belts. As such, the visual impact of the works will be minimal. Upon completion of the works, no residual impacts are anticipated, as the visual appearance of the bridge will remain largely unaffected with renewed bridge joints and surface being the only change.

The following mitigation measures will be put in place during works:

- Throughout all stages of the works, the site will be kept clean and tidy, with materials, equipment, plant and wastes appropriately stored, reducing the landscape and visual effects as much as possible.
- Works will avoid encroaching on land and areas where work is not required or is not permitted. This includes general works, storage of equipment/containers and parking.
- Where applicable, upon completion of the works, any damage to the local landscape will be reinstated as much as is practicable.
- The site will be left clean and tidy following construction.

With the above mitigation measures in place, it is anticipated that any landscape and visual effects associated with the proposed works are unlikely to be significant. This receptor is not considered further in this RoD.

Biodiversity

The A9 River Braan bridge spans the River Tay SAC. Due to the proximity of the works to the SAC, a HRA was carried out to assess the risk of potential effects on the River Tay SAC and concluded that the works would not result in Adverse Effects on Site Integrity (AESI), provided that the following mitigation and good practice measures are followed:

- No works will take place within the boundary of the SAC and no in-water works are required; as such, no direct impacts (e.g., habitat loss) will occur.
- Standard working practices include robust containment measures to prevent pollution events for terrestrial works. With these in place, the risk of indirect effects on the qualifying features of the SAC as a result of pollution is low.
- Measures to reduce noise will be in place during construction to reduce the risk of disturbance to qualifying features.
- A ‘soft start’ will be implemented on site each day. This will involve switching on vehicles and checking under/around vehicles and the immediate work area for mammals prior to works commencing to ensure none are present and that there is a gradual increase in noise.
- Any excavations, exposed pipes/drains, or areas where an animal could become trapped (e.g., storage containers) will be covered over when not in use, at the end of each shift, and following completion of the works to avoid animals falling in and becoming trapped.
- Any temporary lighting used during periods of low light levels will be directional and will avoid spilling into sensitive areas where possible.
- If fencing is utilised at any point during the works, a gap of 200mm from ground level will be provided, allowing free passage for mammals and preventing entrapment.

Activities undertaken on site could potentially have a temporary adverse impact on biodiversity in the area as a result of an increased vehicle presence and the potential for disturbance to protected species and pollution of habitats. The requirement for 24 hour working can also cause mammal species to avoid approaching the A9 River Braan bridge and therefore preventing access to wider areas of foraging, such as River Tay. The works are, however, restricted to the A9 River Braan bridge and the number of construction vehicles and construction operatives required onsite is low given the scale and scope of works. Furthermore, if 24 hour working pattern is to be utilised, the duration of the works will be significantly reduced (from 3 weeks of daytime working to 1 week of 24 hour working) with the most disruptive activities undertaken during the daytime works. In addition, any species in the area are likely to be accustomed to noise and visual disturbance pertaining to vehicle movements on the A9 and high levels of foot traffic by pedestrians and dogs on the riverside walking trails. The scheme is of short duration and will be for most part undertaken from the bridge deck. Only minor works are required under the bridge deck which will be undertaken prioritising daytime working reducing requirement for artificial lighting within the bridge riparian corridor.

No bird nests were recorded on the bridge or in nearby habitat during previous surveys. However, as works are scheduled to commence during the breeding bird season (March to August inclusive), a nesting bird check will be carried out within 48 hours of works commencing. If any nests are found within working areas, additional mitigation measures and a licence from NatureScot may be required. If required, no works will take place until a licence is obtained.

Works will be restricted to the A9 River Braan bridge and will not entail any in-stream works or vegetation clearance. Excavation is limited to bridge deck with no requirement for soil disturbances. The scheme does not require permanent (or temporary) land-take, accommodation works, site clearance or locally gained resources, and there is no requirement to import topsoil. Furthermore, ecological site surveys undertaken to date did not confirm AMPS record of Japanese knotweed within the verges of A9 at the scheme extents. As such, there is limited potential to spread or introduce INNS plant species.

Pollution controls and good practice measures to reduce impacts of works on the local environment will be detailed in the Site Environmental Management Plan (SEMP) and adhered to on site. Therefore, with the following mitigation measures in place, the risk of significant impacts on biodiversity are considered to be low:

- Works will be strictly limited to areas required for access and resurfacing works. Unnecessary encroachment onto terrestrial or aquatic areas will not be tolerated.
- Site personnel will remain vigilant for the presence of potentially unrecorded instances of INNS or injurious weeds in road verges throughout the works period. Should any INNS be identified in working areas, no works will take place within 7m of these areas until the BEAR Scotland Environment Team can provide further advice on additional mitigation measures.
- Site personnel will remain vigilant for the presence of any protected species throughout the works period. Should a protected species be noted during construction, works will temporarily halt until the species has sufficiently moved on. Any sightings of protected species shall be reported to the BEAR Scotland Environment Team.
- A ‘soft start’ will be implemented on site each day. This will involve switching on vehicles and checking under/around vehicles and the immediate work area for mammals prior to works commencing to ensure none are present and that there is a gradual increase in noise.
- Relevant toolbox talks for working with protected species will be included in the SEMP.

- The mitigation measures and good practices included in the HRA for River Tay SAC (listed above) will be adhered to during construction.

With the above mitigation measures in place, it is anticipated that any biodiversity effects associated with the proposed works are unlikely to be significant. This receptor is not considered further in this RoD.

Material assets and waste

There is potential for impacts as a result of resource depletion through use and transportation of new materials. However, materials will be sourced locally where possible and the following mitigation measures will be put in place:

- Materials will be sourced from recycled origins as far as reasonably practicable within design specifications.
- Care will be taken to order the correct quantity of required materials to prevent the disposal of unused materials.
- Where possible, minimal packaging will be requested on required deliveries to reduce unnecessary waste and production of packaging materials.

There is potential for impacts during works as a result of the improper storage or disposal of waste. The following mitigation measures will be put in place:

- The waste hierarchy (Reduce, Reuse, Recycle and Dispose) will be employed throughout the construction works.
- The subcontractor will adhere to waste management legislation and ensure they comply with their Duty of Care.
- Containment measures will be in place to prevent debris or pollutants from entering the surrounding environment.
- Planings will be re-used or recycled under a SEPA Paragraph 13(a) waste exemption and in line with BEAR Scotland's procedure 126: The Production of Fully Recovered Asphalt Road Planings.
- All wastes and unused materials will be removed from site in a safe and legal manner by a licensed waste carrier upon completion of the works. The appointed waste carrier will have a valid SEPA waste carrier registration, a copy of which will be provided to and retained by BEAR Scotland as early as possible.
- All appropriate waste documentation will be present on site and will be available for inspection. A copy of the Duty of Care paperwork must be provided and filed appropriately in accordance with the Code of Practice (as made under Section 34 of Environmental Protection Act 1990 as amended).

- Re-use and recycling of waste will be encouraged and undertaken where possible, and the subcontractor will be required to fully outline their plans and provide documentary evidence for waste arising from the works (e.g., waste carrier's licence, transfer notes, and waste exemption certificates).
- Staff will be informed that littering will not be tolerated. Staff will be encouraged to collect any litter seen on site.

With the above mitigation measures in place, it is anticipated that any material assets and waste effects associated with the proposed works are unlikely to be significant. This receptor is not considered further in this RoD.

Noise and vibration

Construction activities associated with the proposed works have the potential to cause noise and vibration impacts through the use of equipment and construction vehicles for the proposed activities. The works will employ a day-time working pattern with potential for 24-hour working. There are a number of residential properties located within 300m of the works, however, these are set-back (>200m) from the scheme and suitably screened by intervening woodland and commercial premises. Due to the short duration and localised nature of the works, the proposed scheme is anticipated to result in temporary minor noise impacts during the construction programme. The following mitigation measures will be put in place:

- The Best Practicable Means, as defined in Section 72 of the Control of Pollution Act 1974, will be employed at all times to reduce noise to a minimum.
- In the event of night-time programming, the local authority Environmental Health Officer (EHO) will be notified of works.
- In the event of night-time programming, residents in proximity will be notified.
- On-site construction tasks will be programmed to be as efficient as possible, with a view to limiting noise disruption to the local area.
- Activities during the night time hours will be temporary with regular breaks to ensure that there are sufficient breaks from the works vibration and noise.
- All site personnel will be fully briefed in advance of works regarding the need to minimise noise during works and of the site-specific sensitivities.
- All plant will be operated in such a way that minimises noise emissions and will have been maintained regularly to the appropriate standards.
- Where fitted, and where permitted under Health and Safety requirements, white noise reversing alarms will be utilised during construction.

- Where ancillary plant such as generators are required, they will be positioned so as to cause minimum noise disturbance. Where deemed necessary, acoustic screens will be utilised.

With the above mitigation measures in place, it is anticipated that any noise and vibration effects associated with the proposed works are unlikely to be significant. This receptor is not considered further in this RoD.

Population and human health

During construction, activities undertaken on site may have temporary adverse impacts on vehicle travellers, and non-motorised road users (NMUs) as a result of construction presence, and associated noise and delays due to traffic management measures. Road users and local service providers (i.e. bus operators) will be informed of works through a media release, which will provide details of construction dates and times, and planned amnesties.

No significant congestion issues are noted at the scheme location. Increased journey times may occur during construction; however, due to use of traffic lights, any delays are not expected to be significant. Local access will be granted as required, and NMUs will be provided with safe passage through/around the works.

With the following mitigation measures in place, the risk of significant impacts on population and human health is considered to be low:

- ‘Being a Good Neighbour’ Toolbox Talk will be briefed to operatives prior to commencement of works.
- Notification will be issued to local public transport operators prior to commencement of the works, advising of any proposed works and expected restrictions.
- Notification will be issued to nearby properties prior to commencement of the works, advising of any proposed works and expected restrictions.
- Local access will be granted as required.
- Any changes of schedule (e.g. change from day-time to 24-hour working) will be communicated to travelling public throughout the programme.
- Appropriate provisions / measures will be implemented within the TM to allow the safe passage of NMUs of all abilities through the site as required.
- Journey planning information will be available for drivers online at the trafficscotland.org website. Journey planning information will also be available for drivers online through BEAR’s social media platforms.

With the above mitigation measures in place, it is anticipated that any population and human health effects associated with the proposed works are unlikely to be significant. This receptor is not considered further in this RoD.

Road drainage and the water environment

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

No in-water works will take place and there is no requirement for the abstraction or transfers of water from, or discharges to, a waterbody. As such, the potential for a direct pollution incident within a waterbody is unlikely. Experience gained from BEAR maintenance schemes elsewhere on the network has shown that where standard good working practice is adopted (e.g., adherence to SEPA good practice guidance, utilisation of drain covers or similar, etc.), water quality is protected.

The following mitigation measures will be put in place to reduce the risk of pollution incidents as a result of works:

- Standard working practices to comply with The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) for works in or near water are detailed in the SEMP and will be adhered to on site.
- All conditions of SEPA's General Binding Rules (GBRs) 6, 9, 10b and 11 (The CAR Practical Guide) will be adhered to during works
- No discharges into any watercourses or drainage systems will be permitted. Appropriate containment measures will be in place to prevent any loss of construction materials into the water environment.
- Appropriate measures will be implemented during work operations to limit the potential for wastes and materials to enter any gullies present on site. On completion of the work operations, any gullies present on site will be visually checked to ensure they have not become blocked as a result of the scheme.
- An incident response (contingency) plan will be put in place to reduce the risk from pollution incidents or accidental spillages. All necessary containment equipment, including suitable spill kits (for oil and chemicals) will be available on site, quickly accessible if needed, and staff trained in their use.
- All spills will be logged and reported. In the event of any spills into the water environment, all works will stop, and the incident will be reported to the project manager and the BEAR Scotland Environmental Team. SEPA will be

informed of any such incident as soon as possible using the SEPA Pollution Hotline.

- All plant and equipment will be regularly inspected for any signs of damage and leaks. A checklist will be present to make sure that the checks have been carried out.
- Storage of hazardous material, oil and fuel containers will be distanced more than 10m away from any watercourses.
- If required, a designated refuelling area will be identified. Fuel bowsers will be stored on an impermeable area and will be fully bunded. This will be distanced more than 10m from any watercourses.
- During refuelling of smaller mobile plant, a funnel will be used, and drip trays will be in place. Care will be taken to reduce the chance of spillages. Spill kits will be quickly accessible to capture any spills should they occur. The ground / stone around the site of a spill will be removed, double bagged and taken off site as special contaminated waste.
- Generators and static plant may have the potential to leak fuel and / or other hydrocarbons and will have bunding with a capacity of 110%. If these are not bunded then drip trays must also be supplied beneath the equipment with a capacity of 110%.

With the above mitigation measures in place, it is anticipated that any road drainage and the water environment effects associated with the proposed works are unlikely to be significant. This receptor is not considered further in this RoD.

Climate

Construction activities associated with the proposed scheme works have the potential to cause local air quality impacts as a result of the emission of greenhouse gases through the use of vehicles and machinery, material use and production, and transportation of materials to and from site. The following mitigation measures will be put in place:

- BEAR Scotland will adhere to their Carbon Management Policy.
- Local contractors and suppliers will be used as far as practicable to reduce fuel use and greenhouse gas emitted as part of the works.
- Where possible, materials will be sourced locally to reduce greenhouse gas emissions associated with materials movement, and waste will be removed to a local waste management facility.

With the above mitigation measures in place, it is anticipated that any climate effects associated with the proposed works are unlikely to be significant. This receptor is not considered further in this RoD.

Vulnerability of the project to risks

There are no flooding issues noted within the working area on the bridge (which is raised above the banks of the River Braan) and the works will avoid being undertaken during the heavy rain events where possible. Although the banks of the River Braan are noted to have high risk of fluvial flooding, the works do not require entering ground out with the A9 carriageway and the pedestrian underpass, which are set relatively high above the river. There will be no change to the likelihood of flooding on the A9 within the scheme extents upon completion of the works.

The works are restricted to the A9 River Braan bridge, and TM will be designed in line with existing guidance. TM will consist of a single lane road closure and short-term closure of the pedestrian underpass. Where required, alternative NMU provisions/routes will be included in the TM setup, to minimise impact of the works on NMUs.

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.

These measures, along with mitigation measures and standard working practices, will be detailed in the SEMP and adhered to on site. The vulnerability of the project to risks of major accidents and disasters is considered to be low.

Assessment cumulative effects

During construction, activities associated with the works may create several types of minor temporary disturbances such as changes to noise and vibration and air quality. However, these impacts will be temporary in nature and are not anticipated to result in a significant cumulative effect.

A search of the Perth and Kinross Council Planning Portal (Perth and Kinross Council Planning Portal) did not identify approved planning applications within 300m of the scheme in the last year.

A search of the Scottish Roads Works Commissioner website (Map Search) has identified that no other roadworks are currently ongoing, or noted as being planned, on the trunk road at the same time as this scheme. Due to the nature of the

proposed works, no cumulative effects are anticipated with any other developments in the vicinity.

BEAR Scotland programme all of their proposed works in line with appropriate guidance and contractual requirements. All schemes are programmed to take into account existing and future planned works, with a view of limiting any cumulative effects relating to TM. As a result of this exercise, where a potential for cumulative impacts is identified, BEAR will reprogramme schemes to avoid / limit any cumulative effects or will utilise existing TM to complete multiple schemes at once. This approach allows BEAR Scotland to effectively manage the potential cumulative effects as a result of TM, resulting in minimal disruption to users of the Scottish trunk road network.

Overall, it is unlikely that the proposed works will have a significant cumulative effect with any other future works in the area.

Assessments of the environmental effects

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

A HRA was completed due to proximity and ecological connectivity with the River Tay SAC. The assessment concluded that with appropriate measures in place, the proposed works will not result in Adverse Effects on Site Integrity (AESI).

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) is spans the River Tay SAC and is situated within the River Tay (Dunkeld) NSA, which are sensitive areas 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 EIA 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 A9 River Braan bridge joints and repairs to the bridge deck. All works restricted to the A9 trunk road boundary.
- Construction activities are restricted to an area of 0.01ha along a 100m stretch of the A9.
- The works will be temporary, transient, localised, and completed during day-time hours with potential for 24-hour working over up to 3 weeks.
- 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.
- Removing the A9 River Braan bridge defects will provide this part of the A9 carriageway with another life cycle, and significantly improve the ride quality, which will result in safer conditions for road users.

Location of the scheme:

- The scheme spans the River Tay SAC. A HRA (including Appropriate Assessment) has been carried out and has concluded that works will not result in AESI on the qualifying features.
- Although the scheme is located within the River Tay (Dunkeld) NSA, the works are like-for-like in nature and no change to the visual landscape is expected.
- There are no features of Cultural Heritage within the footprint of the works.
- The scheme will be located within the existing A9 road boundary and as such, no land take will be required.

Characteristics of potential impacts of the scheme:

- Any potential impacts of the works are expected to be temporary, short-term, non-significant, and limited to the construction phase.
- Measures will be in place to ensure appropriate removal and disposal of waste.
- No impacts on the environment are expected during the operational phase as a result of works. The works are expected to result in positive impacts on road users, ecological and human receptors during the operational phase.

- As the works will be limited to the like-for-like replacement there is no change to the vulnerability of the road to the risk or severity of major accidents/disasters that would impact on the environment.
- Mitigation measures detailed above (and in the SEMP) will be put in place with the objective to prevent and, if required, subsequently control any potential impacts on sensitive receptors.

Annex A

"sensitive area" means any of the following:

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

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