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Environmental Impact Assessment Record of Determination

A9 410 River Braan Embankment - Emergency Scour Repair

Contents

Project Details

Description

BEAR Scotland has been commissioned by Transport Scotland to carry out emergency repair works on a section of embankment within the River Braan adjacent to the A9 carriageway at Dunkeld.

Embankment repair works are required following damage caused by severe weather during Storm Babet; a void has been created from scour on the embankment which is undermining the foundation of the southeast A9 410 River Braan wing wall. A footbridge was located adjacent to (but not connected to) the A9 410 River Braan structure which has subsequently collapsed during the adverse weather event, causing extensive damage to the southeast embankment. Gabion baskets and a section of the footpath have been washed away at this location. The adjacent A9 410 River Braan bridge is now at ongoing risk to scour during high water levels.

The National Trust (NT) owns the land covering the southeast embankment, footpath and footbridge however due to the associated damaged also caused to the A9 410 River Braan structure, BEAR Scotland will complete the repair works as soon as possible.

The proposed repair works would be completed during low water levels, and will include the following:

- A Hi-Ab will be sited on the adjacent A9 carriageway and will place rock bags into the watercourse. Rock bags will be used for the following:
    - To create a barrier within the flowing watercourse to enable a dry working area to be established around the scoured wingwall and embankment. A lining will be used to ensure the dry-working area is contained.
    - Following concrete works, rock bags will be used to stabilise and rebuild the toe of the scoured embankment, out to the external rock bag wall.
- Mass concrete will be pumped into the void below the wing wall foundation to stabilise the southeast embankment and reconstruct the section of footpath that has been damaged.
    - Concrete will be delivered to site and will be pumped from the delivery truck (sited on the A9 carriageway) down to foot of wing wall.
    - Concrete formwork will be installed within the dry working area.

    - Exact details of this set-up are yet to be determined, and will be reviewed by SEPA prior to the works.
- Tree clearance will be undertaken on the embankment using chainsaws (approximately seven trees to be felled).
- A footpath will be recreated to allow pedestrian traffic to continue safely, details of which are yet to be confirmed.

Approximate length of the bank reinstatement is 50m, and the total works area is assumed to be less than 1ha.

The works are required to be undertaken as soon as possible and will likely be completed within November 2023 (weather permitting). Duration and exact timings are yet to be confirmed however daylight hours are likely to be favoured due to the nature and location of the works. Dependent on weather conditions, 24hr working may be undertaken.

Traffic management will involve a northbound lane closure with temporary traffic lights and a 30mph speed limit. A site compound will be situated within a lane closure on the northbound A9 carriageway (30m x 3m). The damaged footpath is currently closed, and restrictions will remain in place prior to and during the works.

Location

The works are located on a section of riverbank adjacent to the northbound A9 carriageway, west of Dunkeld in the Perth and Kinross Council area (Figure 1). The scheme has the National Grid Reference (NGR) NO 02305 42166.

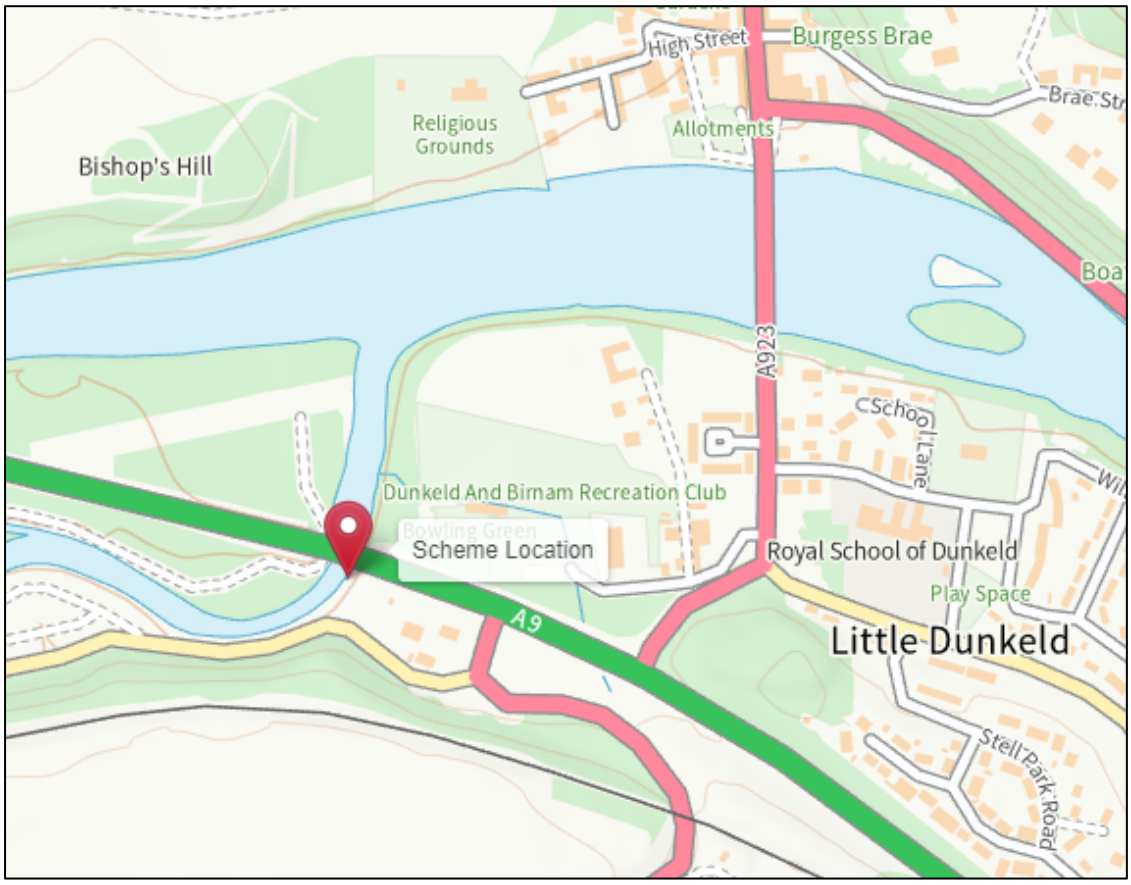

Figure 1. Location of the proposed scour repair works at A9 410 River Braan. Source: BEAR Scotland. F108 – Environmental Assessment Request (Scheme ref: 23-NW-1201-24).

Description of local environment

Air quality

The scheme does not fall within any Air Quality Management Areas (AQMA) (Air Quality Scotland). The nearest air quality monitoring station is located in Fort William, approximately 20km southeast of the scheme (Air Quality Scotland). Pollution levels in the general vicinity of works are anticipated to be lower than those at the monitoring station in Perth due to the more remote nature of the scheme location.

Baseline air quality is likely to be primarily influenced by traffic along the A9 trunk road, with secondary sources likely to arise from nearby urban activities associated with Dunkeld.

No sites are registered on the Scottish Pollutant Release Inventory (SPRI) (Scotland's Environment) within 10km of the scheme.

Average Annual Daily Flow (AADF) was estimated for the nearest traffic count point on the A9 carriageway located 4km south of the scheme in 2022, and accounted for 12,348 vehicles, of which 7.4% were heavy goods vehicles (HGV) (Road Traffic Statistics).

Cultural heritage

A desktop study using PastMap identified the following features of cultural heritage within 300m of the scheme extents:

- One Listed Building: Manse, Little Dunkeld (Category C, ID: LB11162), which is located approximately 270m northeast of the scheme.
- The Dunkeld Conservation Area (CA587), which lies approximately 210m north of the scheme.
- Three Historic Environment Records (HER); the closest of which is Ladywell (MPK6336) which is located 200m south of the scheme and comprises a record of old field boundaries.

There are no World Heritage Sites, Scheduled Monuments, Battlefields, or Garden and Designed Landscapes within 300m of the scheme.

Landscape and visual effects

The scheme is located entirely within the River Tay (Dunkeld) National Scenic Area, which has the following special general qualities (Sitelink):

- 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 Landscape Character Type (LCT) within the scheme extent is categorized as Lower Upland Glens (LCT No. 372) (Scottish Landscape Character Types), which is characterised by:

- 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, gorge-like 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 - 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.

Historic Environment Scotland's HLAMap has highlighted the surrounding landscape to consist of a combination of plantation, recreation areas, urban areas, and freshwater (as provided by the River Braan and River Tay). The A9 carriageway and a railway line travel parallel to each other at this location, forming an engineered corridor in the landscape.

Biodiversity

River Tay Special Area of Conservation (SAC) encompasses the River Braan at the scheme location (Nature Scot Sitelink). No other designated biodiversity sites are recorded within 2km of, or share connectivity with, the scheme.

Several bird species have also been recorded within 2km of the works. Under the Wildlife and Countryside Act 1981, all wild birds and their active nests are protected.

The NBN Atlas also holds record of the following invasive non-native species (INNS) of plant under the same search criteria:

- Himalayan Balsam (*Impatiens glandulifera*), recorded 1.9km northwest of the scheme.
- Japanese Knotweed (*Fallopia japonica*), one record of which is located on the eastern bank of the River Braan within 60m of the scheme.

In addition, Transport Scotland's Asset Management Performance System (AMPS) holds records of Japanese knotweed growth on the opposite bank of the River Braan, within 20m of the works.

No injurious weeds (as listed under the Weeds Act 1959), or invasive native perennials (as listed in the Trunk Road Inventory Manual) were identified on NBN or AMPS utilising the same search criteria.

Habitat in the surrounding area comprises woodland, heathland, and freshwater habitat as provided by River Braan/River Tay.

An area of woodland listed as Ancient (of semi-natural origin) on the Ancient Woodland Inventory (AWI) lies approximately 80m south of the scheme extent. No Tree Preservation Orders (TPOs) are located within 300m of the scheme (Perth and Kinross Council).

Ecological Surveys

BEAR Scotland's Environment Team conducted a preliminary ecological appraisal (PEA) and preliminary roost assessment (PRA) of the A9 410 River Braan and surrounding area on 5 May 2023. This PEA/PRA was conducted in advance of an expansion joint replacement scheme on the A9 bridge structure adjacent to the proposed scheme.

An updated pre-works ecological survey was carried out by BEAR Scotland in November 2023.

Geology and soils

The scheme is not located within a Geological Conservation Review Site (GCRS), or a geologically designated Site of Special Scientific Interest (SSSI) (SiteLink).

Bedrock geology within the proposed scheme extents is recorded as 'Southern Highland group' (semipelite and psammite), which is a metamorphic bedrock (BGS GeoIndex).

Superficial deposits within the scheme are recorded as sedimentary superficial deposits of alluvium (clay, silt, sand and gravel) (BGS GeoIndex).

Soils recorded within the immediate vicinity of the scheme are mineral podzols (Scotland's Soils), and 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.

Material assets and waste

The proposed works are necessary to reinstate a section of embankment and associated footway. Materials used for stabilisation works will consist of mass concrete and rock bags. Wastes are anticipated to mainly be vegetation waste from tree felling activities, which will be removed off site for disposal or re-use where possible. Some rock/material from the overhanging embankment may also be removed.

A Site Waste Management Plan (SWMP) is not required for this scheme.

Noise and vibration

The A9 410 Braan bridge lies on the outskirts of Little Dunkeld, a small village adjoining the larger town of Dunkeld. As such, there are a number of residential properties located within 300m of the bridge; the closest of these is located 95m east. The Inver Mill Farm Caravan Park lies approximately 170m southwest of the scheme; a total of 24 caravans from this park fall within 300m of the scheme extents. Intervening woodland provides a moderate level of screening between the works are these surrounding properties.

The works do not fall within a Candidate Noise Management Area (CNMA), as defined by the Transportation Noise Action Plan (TNAP).

The day, evening, and night (Lden) noise modelled data is recorded as 65-75 dB for the scheme extent (Scotland's Noise Scotland's Environment). Baseline noise levels

are likely to be primarily influenced by traffic travelling along the A9 trunk road, with secondary inputs likely to arise from nearby urban activities.

Population and human health

Several residential properties and guest accommodation properties are located within 300m of the scheme, as outlined in the Noise and Vibration section above.

Dunkeld Builders Ltd, an industrial/commercial property, is located 30m east of the scheme. Other properties in proximity include the Dunkeld and Birnam Highland Games Field and Bowling Club, located approximately 120m to the northeast of the scheme.

The scheme is located within a Core Path, which travels from River Braan at Bowling Green to Newton Craig car park (Code: DUNK/23) (Perth and Kinross Council). This path is an established route along the River Braan, and prior to recent flood damage was channelled across the River Braan at this point via a footbridge. This footbridge no longer exists, and part of the Core Path on the riverbank has also been damaged.

No routes listed on the National Cycle Network (NCN) are located within 300m of the scheme extent (Sustrans).

Two walking routes as listed on WalkHighlands are located within 300m of the scheme, however neither of these travel via the scheme extent.

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 is a single carriageway at the River Braan bridge, in proximity to the scheme.

Road drainage and the water environment

The scheme is located on the eastern bank of River Braan (ID: 6576), immediately south of the A9 River Braan bridge west of Dunkeld. River Braan is within the River Tay catchment, and the main stem is approximately 13.8 kilometres in length. This waterbody has been classified by the Scottish Environment Protection Agency (SEPA) under the Water Framework Directive 2000/60/EC (WFD) and was assigned a condition of 'Good' in 2020 (SEPA Water Environment Hub).

River Braan outflows into River Tay (ID: 6499) 200m north of the scheme. The main stem of River Tay is approximately 30.3 kilometres in length. The water body has

been designated as a heavily modified water body on account of physical alterations that cannot be addressed without a significant impact on water storage for hydroelectricity generation. River Tay was classified by SEPA in 2020 with an overall status of 'Poor ecological potential'.

The scheme falls within the 'Tummel and Tay Sand and Gravel' groundwater body (ID: 150735), which was classified by SEPA in 2020 as having an overall status of 'Good' (SEPA Water Environment Hub). This groundwater body is also a designated Drinking Water Protected Area (DWPA) (Ground).

The scheme is located within the Spean and Lochy Sand and Gravel (ID: 150776) and Fort William (ID: 150696) groundwater waterbodies, which the Scottish Environment Protection Agency (SEPA) classified in 2020 as having overall status of 'Good' (SEPA Water Environment Hub). These are also recorded as Drinking Water Protection Areas (Ground) (Scottish Government).

River Braan at the scheme location has a potential for river water flooding (each year this area has a 10% chance of flooding) (SEPA Flood Map).

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. Activities undertaken on site may cause dust and particulate matter 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 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 scheme will be maintained in order to minimise emissions, as per manufacturing and legal requirements. No significant dust, particulate matter, and exhaust emissions (DPMEE) 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.
- Material stockpiles will be reduced as far as is reasonably practicable by using a ‘just in time’ delivery system. All material will be stored on made ground.
- Any stockpiled material on site will be monitored daily to ensure no risks of dust emissions exists.
- Waste materials will be removed from site as soon as is practicable.
- Good housekeeping will be employed throughout the work.
- Drop heights to and from haulage vehicles will be minimised as far as is reasonably practicable.

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 Record of Determination (RoD).

Cultural Heritage

Various features of cultural heritage are located within 300m of the scheme; the closest of which is a HER which is located 200m south of the scheme. There is a

potential pollution pathway from the proposed works to a section of the River Tay which is designated under the Conservation Area. Pollution incidents could impact the natural heritage of the Tay River and thus the character of the Dunkeld Conservation Area. Pollution mitigation measures as outlined in the *Road drainage and the water environment* section will be in place, and as such potential impact to this from the work is not considered likely. There is no connectivity between the scheme and the other noted cultural heritage records.

Construction of the A9 road corridor and associated verge profiling is likely to have removed any unrecorded archaeological remains that may have been present within the works area. No excavation is required. Therefore, the potential for the presence of unknown archaeological remains in the study area has been assessed to be low. The following good practice measures will be in place to reduce the risk of impacts to undiscovered features of cultural heritage interest:

- There will be no storage of vehicles, plant, or materials against any buildings, walls or fences.
- Should any unexpected archaeological evidence be discovered, works will stop temporarily in the vicinity and the BEAR Scotland Environment Team contacted for advice.
- People, plant, and materials will, as much as is reasonably practicable, only be present on areas of made / engineered ground. Where access outwith these areas is required for the safe and effective completion of the scheme, it will be reduced as much as is reasonably practicable and ideally be limited to access on foot.

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

Landscape and visual effects

There is potential for minor to moderate temporary visual impacts to the local landscape during the construction phase, as a result of presence of vehicles, machinery and site compound on the A9 carriageway, in addition to works at and around the River Braan embankment. Permanent visual change will occur due to use of infill materials within the river, however these will be localised to the current area of damaged embankment beside the existing A9 410 River Braan bridge structure.

Land use will not change as a result of the works, and the works will not result in any major residual change to the visual amenity of the local landscape. Amendments to the Core Path/footpath will occur following the works, however these will be to reinstate any damaged sections as far as is reasonably practicable. 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 shall be reinstated as much as is practicable.

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

Activities undertaken on site could potentially have a temporary adverse impact on biodiversity in the area as a result of the potential for disturbance to protected species and removal or pollution of habitats.

The works will take place within the River Tay SAC. A HRA has been undertaken which concluded that no Likely Significant Effects (LSE) on the qualifying features of the River Tay SAC are predicted, as agreed by NatureScot. Measures will be in place to mitigate water pollution during the works, and use of a dry working area for the majority of the works will further limit pollution potential.

Any change to the proposed working methods will be reviewed by NatureScot where required, to ensure assessment of no LSE is still valid. Works will not be undertaken without agreement from NatureScot.

Vegetation clearance will be required for the works. Evidence of various protected species and INNS have been recorded in the surrounding area during a PEA undertaken in May 2023, and suitable habitat for additional species was also noted. As such, there is potential for protected species to be active in the area during the works, and also potential to spread or introduce INNS.

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:

- A pre-works' check of the site for evidence of protected species (including shelter), and INNS will be undertaken. In the event of identification, appropriate mitigation measures will be put in place, following advice/authorisation from Nature Scot.

- An Ecological Clerk of Works will oversee the works, to monitor adherence to advised mitigation measures and any authorisation/consent.
- 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.
- Works will be strictly limited to areas required for access and works. Unnecessary encroachment onto terrestrial or aquatic areas will not be tolerated.
- 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.
- 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.
- Additional mitigation measures related to pollution are outlined in the *Road drainage and the water environment* section below.

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.

Geology and Soils

The works will require infill of scoured embankment. No excavation is required for these works, however establishment of access routes from the A9 and works on the embankment may result in exposure/disturbance of topsoil. The following measures will be applied to on site:

- The parking of machinery/personnel and storage of equipment on road verges will not be permitted.
- No storage of materials will occur out with the existing engineered A9 carriageway boundary.
- Any damage to local landscape/soils will be reinstated on completion of works and will utilise appropriate and compatible imported soil types where requried.
- Standard good practice measures, like containment measures for working near water, to prevent water and soil pollution will be detailed in the SEMP and adhered to on site.

With the above mitigation measures in place, it is anticipated that any geology and soils 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 must 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.
- 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 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. Duration and timings of the works are yet to be confirmed; a daylight working pattern is likely to be employed, however 24hr or night-time construction is not ruled out at this stage. Numerous properties fall within 300m of the scheme, however moderate levels of screening exist between these and the proposed scheme due to presence of intervening woodland. Due to the 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.
- Residents within 300m of the scheme will be notified in advance of the works, likely by a letter drop. This notification will include details of proposed nature,

timings and duration of the works, and a 24-hour contact number for the BEAR Scotland Control Room.

- In the event of night-time programming, the Environmental Health Officer (EHO) for the Perth and Kinross Council will be notified of works.
- In the event of night-time programming, the noisiest works will be programmed to be completed as early in the nightly schedule as possible (where reasonably practicable).
- On-site construction tasks will be programmed to be as efficient as possible, with a view to limiting noise disruption to local sensitive receptors.
- 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.

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 local residents, vehicle travellers, and non-motorised road users (NMUs) as a result of construction presence, and associated noise and delays due to traffic management measures. Restrictions are currently in place on the local footpath, and these will remain during the works, however this will be reinstated on completion of works. Road users and local bus operators will be informed of works and TM restrictions through a media release, which will provide details of construction dates and times. With the following mitigation measures in place, the risk of significant impacts on population and human health is considered to be low:

- Foot path restrictions and detoured routes will be sign posted in advance of the works.
- Notification will be issued to local residents and local public transport operators prior to commencement of the works, advising of any proposed works and expected restrictions.

- Any changes of schedule (e.g. change from night-time works to daytime works) will be communicated to local residents throughout the programme.
- Appropriate provisions / measures will be implemented within the TM to allow the safe passage of NMUs.
- 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 Scotland'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

There is potential for temporary impacts on the water environment due to operation within and within proximity of the River Braan. 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 or tidal movements) during works have the potential to have a direct or indirect effect on the this and surrounding waterbodies.

Consultation with SEPA has been undertaken, and it was confirmed that registration of the works will be required under The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) ('CAR'). No further authorisation has been advised by SEPA. Registration will be undertaken prior to commencement of the works.

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

- Any conditions outlined in advised/obtained authorisation from SEPA will be enacted on site during the works. A copy of any authorisation (where required) will be retained on site and made available for inspection as required.
- All conditions of SEPA's General Binding Rules (GBRs) 6,9, 10b, and 13 (The CAR Practical Guide) will be adhered to during works.
- Pollution control measures, including relevant SEPA Pollution Prevention Guidelines (PPGs) and Guidance for Pollution Prevention (GPPs), as well as other good practice measures for working in or near water, will be detailed in the SEMP and adhered to on site to prevent sediment or other materials entering the water environment.
- A toolbox talk on silt and sediment containment will be delivered to all site staff as part of the site induction.

- No discharges into any watercourses or drainage systems will be permitted and appropriate containment measures will be in place to prevent any loss of construction materials into the water environment (e.g. dust, debris, wet concrete). Any dust, concrete debris, or other materials produced during works will be contained and removed from site to be disposed of appropriately.
- Concrete works will be carried out within a dry working area. Pollution prevention measures will be in place to manage concrete (including any wash water), and prevent escape to the watercourse.
- No concrete batching will be carried out on site. Ready-made concrete will be delivered to site via tanker and pumped into the area of works.
- Concrete pouring equipment and formwork will be inspected prior to release of any concrete. Piped distances for concrete will be limited to the minimum distance required.
- Any concrete washout of equipment will be carried out on an impermeable surface at least 10m away from drains and water bodies.
- Concrete and other materials will not be stored within the dry working area. Site staff will take only the minimum amount necessary to carry out works in the dry working area during each work period.
- Rock material to be placed within the watercourse will be washed off site prior to installation, to remove fine sediments.
- 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 shall 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 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 shall also be supplied beneath the equipment with a capacity of 110%.
- All material within the compound area and works area will be stored on made ground and, where feasible, 10m away from potential pollution pathways such as drains and watercourses.
- Materials required within the area of works will be transported only as required. No stockpiling will occur within the dry working area or within 10m of the watercourse boundary.
- Any materials transported into the area of works will be temporarily situated on or within appropriate containment systems until ready for use.

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 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 disposed at local landfill.

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

The River Braan and associated embankment at the works location are recorded as being at high risk of river water flooding; the nature of the repair works further reinforces this assessment. These works are required to prevent any further scour potential for the A9 410 River Braan bridge structure, and associated risk to the A9 carriageway.

Works will be programmed as far as is reasonably practicable to avoid periods of adverse weather or heavy rainfall, and will ideally be undertaken during periods of low water levels.

Traffic management will be designed in line with existing guidance and is anticipated to involve a single lane closure on the A9 carriageway. Two-way traffic lights and reduced speed limit will be in effect.

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 of 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 (Map Search) did not highlight any planning applications within 300m of the scheme.

A search of the Scottish Roads Works Commissioner's website (Map Search) has identified planned works by Scottish Gas Network (SGN) at various points on the A9 carriageway surrounding Dunkeld; the closest location of which is found 300m west of the scheme. These works commenced on 23/10/2023 and are programmed for a duration of 87 days. Overlap of the scheme with these planned SGN works is likely due to the urgent nature of the scheme. As such, dependent on SGN TM, there is potential for combined impacts such as increased travel times/delays on users of the A9 carriageway through Dunkeld. Any potential combined impacts to journey times will be mitigated through media release of proposed restrictions, and BEAR Scotland's Network Team will undertake any required consultation with third parties to prevent overlap of restrictions as far as is reasonably practicable.

An expansion joint replacement scheme is proposed for the A9 410 River Braan bridge structure, however this will take place following any emergency repair works (likely in December), and will only take three days to complete. As such, these schemes will not overlap. 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 traffic management. As a result of this exercise, where a potential for cumulative impacts is identified, BEAR Scotland will consult with other bodies undertaking works and (where possible) reprogramme schemes to avoid / limit any cumulative effects or will utilise existing traffic management to complete multiple schemes at once. This approach allows BEAR Scotland to effectively manage the potential cumulative effects as a result of traffic management, 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. Any cumulative TM impacts due to overlap of SGN and BEAR Scotland works will be reviewed and managed as far as reasonably possible.

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.

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 partially within The River Tay 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 (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 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:

- The total working area is less than 1ha.
- The works will be temporary and localised to the area of scour damage.
- Works are not expected to result in significant disturbance to protected species that may be present in the wider area.
- Field surveys to date have not identified any protected species shelters and no protected species licences have been required. A pre-works inspection will occur prior to the works to confirm previous ecological data.
- The risk of major accidents or disasters is considered to be low.
- By reinstating areas of scoured embankment, this will aim to reduce risk of failure at the adjacent A9 410 River Braan Bridge and associated carriageway, which will result in safer conditions for road users.
- No impacts on the environment are expected during the operational phase as a result of works.

Location of the scheme:

- Works are located within River Tay SAC. Due to the localised and contained nature of the works, these are not likely to result in significant impacts (as confirmed by Nature Scot). No LSE are predicted.
- Works are located within River Tay (Dunkeld) NSA. Works are not anticipated to result in any change to the special qualities of this NSA.
- The site compound will be located on made ground.

Characteristics of potential impacts of the scheme:

- Containment measures of the working area will be in place to prevent debris or pollutants from entering the surrounding environment.
- Residual visual impacts will be localised to the existing A9 410 River Braan bridge structure and are not considered significant.
- Measures will be in place to ensure appropriate removal and disposal of waste.
- The SEMP will include plans to address environmental incidents.
- 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 foot path users during the operational phase due to reinstatement.
- In the event that INNS are found on site, measures to prevent potential INNS spread will be implemented.
- In-combination effects are limited to potential increased travel times for users of the A9 carriageway. Cumulative impact will be minimised where possible.

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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