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Environmental Impact Assessment Record of Determination

A82 Falls of Falloch – Carriageway Resurfacing

Contents

Project Details

Description

BEAR Scotland has been commissioned by Transport Scotland to carry out resurfacing works on a stretch of the A82 carriageway near the scenic point of Falls of Falloch within the Stirling Council.

The treatment will include replacement of course (100mm depth) and binder course (depth to be confirmed) and reinstatement of road markings. The scheme is 870m in length with a total area of 0.52ha.

Main plant will include pavers, planers, excavators, and rollers. A welfare unit with generator will be required on site, and heavy goods vehicles (HGVs) will be required for transport of materials and wastes.

The resurfacing procedure is as follows:

- Set up traffic management (TM) and mark out site.
- Mill out old surface course.
- Lay new surface course.
- Install kerbing within pavement.
- Roll surface and allow it to go off.
- Install road markings and studs.
- Remove TM and open road.

The works are currently programmed to be completed within the 2024/2025 financial year over 3 days by utilising daytime working hours (07:00 – 19:00). If the programme changes, there may be a requirement for night-time working.

Traffic management (TM) will consist of daytime lane closures with a convoy working. Site access and plant storage will be located within TM. If the programme changes, this may result in amendments to the exact TM requirements.

Location

The scheme is located on a stretch of the A82 carriageway near the scenic point of Falls of Falloch, approximately 2.5km north of Inverarnan, within the Stirling Council (Figure 1) (Grid ref: NN 33154 20598 to NN 34018 21065). Works will take place on both the northbound and southbound lanes at this location.

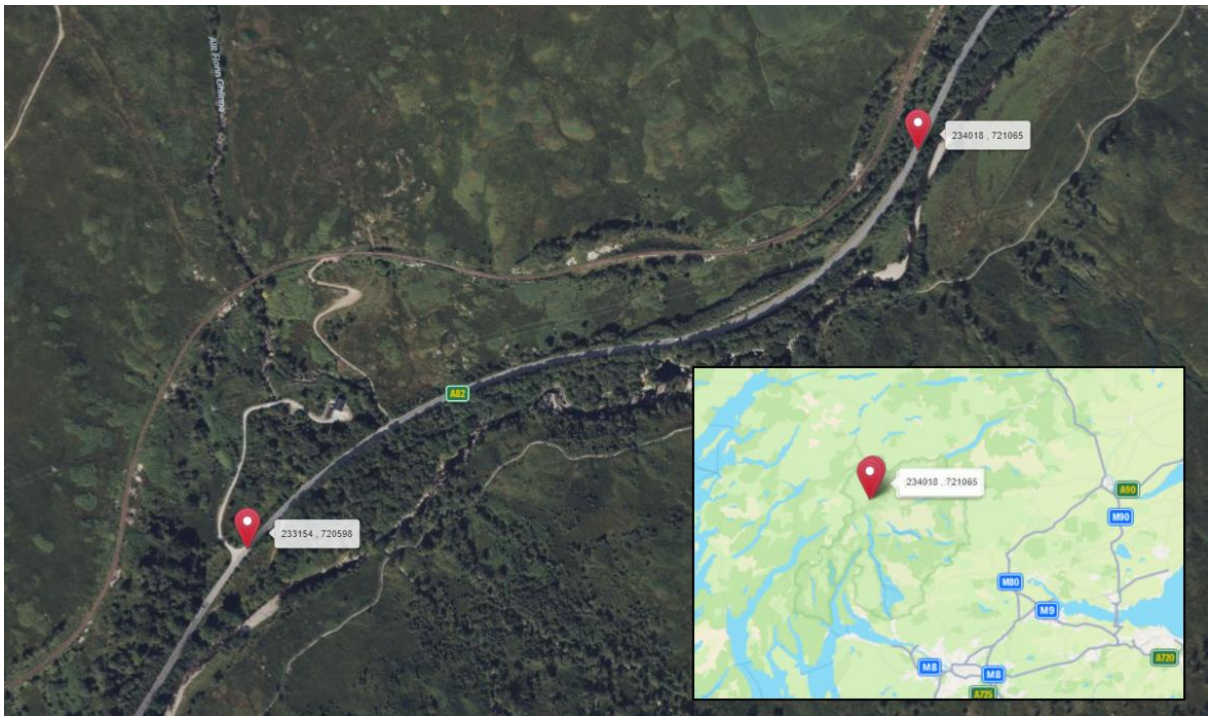

Figure 1. Location and scheme extent of the proposed resurfacing works.

Description of local environment

Air quality

The scheme does not fall within any Air Quality Management Areas (AQMA) (Air Quality Scotland).

No Air Quality Monitoring Stations (AQMS) are located within 10km of the proposed works (Air Quality in Scotland).

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

A manual traffic count point (ID: 761) on the A82 carriageway approximately 1.5km south of the works provides average annual daily flow (AADF) data for A82 traffic. In 2022, AADF at this point was recorded 3,552 vehicles, including 183 (5.1%) heavy goods vehicles (HGVs) (Road Traffic Statistics).

Cultural heritage

A desktop study using Historic Environment Scotland's PastMap has identified the following features of cultural heritage within 300m of the scheme:

- Approximately five Historic Environment Records (HERs), the closest of which pertains to an archaeological survey (Glen Falloch Hydro Schemes (Allt Fionn)), lies adjacent to the A82 within the scheme extents.
- Two Canmore records, the closest of which is a farmhouse located 25m east of the A82 carriageway (Allt Fionn Ghlinne, Glen Falloch).

No Garden & Designed Landscapes, Listed Buildings, Scheduled Monuments, Conservation Areas, Battlefields, or World Heritage sites were identified within 300m of the scheme (PastMap).

The works are confined to the carriageway surface with no verge works required. Furthermore, construction of the A82 is likely to have removed any archaeological remains that may have been present within the area and as such 'cultural heritage' is scoped out and is not discussed further within this RoD.

Landscape and visual effects

The scheme extent is located within Loch Lomond and the Trossachs National Park (LLTNP). The LLTNP has the following general Special Qualities:

- A world-renowned landscape famed for its rural beauty,
- Wild and rugged highlands contrasting with pastoral lowlands,
- Water in its many forms,
- The rich variety of woodlands,
- Settlements nestled within a vast natural backdrop,
- Famous through-routes,
- Tranquillity,
- The easily accessible landscape splendour.

The scheme is not located with a National Scenic Area (SiteLink).

The Landscape Character Type (LCT) within the scheme extent is categorized as 'Upland Glens – Loch Lomond & The Trossachs' (no. 252) (Scottish Landscape Character Types), which is characterised by:

- Often narrow with little flat glen floor, strongly enclosed by steep hill slopes of the adjacent Steep Ridges and Hills and Highland Summits.
- Steep glen sides often patterned with rocky outcrops, boulders and screes but also extensively forested, particularly on lower slopes.
- Tributary burns and rivers cut deep gullies into slopes and many feature waterfalls and cascades, pools and rocky outcrops.
- Walled pastures sometimes occasionally occurring on lower (usually south-facing) slopes. Heather covers better drained areas and bright green flushes appear at spring lines on hill slopes.

- Some glens covered with extensive coniferous forestry.
- Notable ancient and semi-ancient woodlands of oak and birch in some glens, Natural regeneration of scrub woodland where grazing has declined as in the Luss Glens.
- Relict wood pasture and Caledonian pine woodlands evident in some areas.
- Scattered trees and native woodland trace the edges of burns.
- Sparsely settled but with some isolated farms in lower reaches of glens, these often south-facing. The
- Significant cultural features in more open glens, including shielings and abandoned field systems.
- Areas of crofting evident on some lower slopes.
- Some important historic strategic routes for communications and accommodate key road and rail links today for example.
- Classic views channelled up and down the Glens, with steep side slopes framing landscapes that lie beyond them.

The scheme is located in a rural stretch of the A82 carriageway with tree belts either side of the carriageway. Mountain areas lie beyond the tree belts and form a major landscape feature within the wider area.

West Highland Railway Line lies 40m west of the scheme at its nearest point.

Biodiversity

Loch Lomond Woods Special Area of Conservation (SAC) lies 700m southeast of the scheme at its nearest point.

Glen Etive and Glen Fyne Special Protection Area (SPA) lies 180m west of the scheme at the nearest point.

There are no locally or nationally designated sites with biodiversity features such as Sites of Special Scientific Interest, Local Nature Reserves or National Nature Reserves which are located within 300m of the scheme (SiteLink).

The National Biodiversity Network (NBN) Atlas did not highlight records of protected species within 2km of the scheme in the last 10 years (only records with open-use attributions (OGL, CCO, CC-BY) were included in the search criteria) (NBN Atlas).

No records of bird species were highlighted on NBN Atlas within the same search criteria. However, due to the scheme location and proximity of the SPA, it is expected that bird species are present within the area. Under the Wildlife and Countryside Act 1981 (as amended), all wild birds and their active nests are protected.

The NBN Atlas was also searched using the same criteria for plant species; however, no invasive non-native species (INNS) of plants, injurious weeds, or native invasive perennials were recorded.

A search using Transport Scotland's Asset Management Performance System (AMPS) also did not return any records for INNS, injurious weeds or invasive perennials.

Habitat in the surrounding area is dominated by open fields of temperate shrub heathland with some areas of woodland flanking the trunk road and nearby waterbodies. Allt Fionn Ghlinne/Sput Ban/Allt Oss, River Tulloch and numerous tributaries which lie in proximity to the scheme provide some freshwater habitat for variety of species and, together with surrounding land, provide habitat which could support amphibians as well as breeding birds during the breeding period (March – August inclusive).

Two areas of woodland as listed on the Ancient Woodland Inventory (AWI) are located within 300m of the scheme extent (SE Map). The nearest of these lies adjacent to the A82 within the scheme extents.

There are no areas of woodland or individual trees covered by a Tree Preservation Order (TPO) within 300m of the scheme extents (Stirling Council).

Considering the traffic density at the scheme extent, it is considered unlikely that any terrestrial mammal species of conservation importance are associated with permanent habitat or resting places within the area of likely construction disturbance. There is potential for mammal activity within adjacent tree lines, however it is unlikely that any permanent shelter features will be situated in close proximity to the A82. Therefore, a field survey has been ruled out, and a desktop study has been deemed sufficient for this assessment.

Geology and soils

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

Bedrock within the scheme extent is comprised of Ben Ledi Grit Formation (psammite and semipelite), which is a metamorphic bedrock and North Britain Siluro-devonian Calc-alkaline Dyke Suite (lamprophyres), which is an igneous bedrock (BGS Geology Viewer).

No details of superficial type are currently available for this location on the British Geological Society (BGS Geology Viewer).

The local soil type is recorded as mineral and peaty podzols (Scotland's Environment Map).

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 and 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 resurface sections of the A82 carriageway, requiring base/binder inlay, and reinstatement of road markings, studs, and kerbing where required. Materials used will consist of:

- Asphaltic material
- Bituminous emulsion bond coat
- Milled in road studs
- Thermoplastic road marking paint

Wastes are anticipated to be removed planings from the existing surface course, which 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 has been registered in accordance with a Paragraph 13(a) waste exemption issued by SEPA, as described in Schedule 3 of the Waste Management Licensing Regulations 2011.

The scheme does not exceed £350,000 value and as such a Site Waste Management Plan (SWMP) is not required for these works. Coal tar has not been highlighted as being present within the scheme extent.

Noise and vibration

For sensitive receptors, refer to the 'Population and Human Health' section below.

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

There are no modelled noise levels (Lden and Lnight) within the scheme extents (Scotland's Noise Scotland's Environment).

Baseline noise levels in the scheme extent are likely to be primarily influenced by traffic along the A82.

Population and human health

There are no residential or other sensitive properties within 300m of scheme extents.

An access route to the scenic point of Falls of Falloch lies within the scheme extents. In addition, numerous access points to local fields lie within the scheme and in close proximity to the scheme.

One core path (SE Map) travels parallel to the A82 carriageway 170m east of the scheme at its nearest point. No National Cycle Network (NCN) routes lie within 300m of the scheme (OS Maps).

A section of the walking route 'Meall an Fhudair, near Inverarnan' as listed on WalkHighlands utilises the A82 carriageway within the scheme extents.

No laybys or other dedicated non-motorised user facilities are located within the scheme extents.

TM will involve daytime lane closures with a convoy working.

The A82 Trunk Road connects Alexandria with Crianlarich, Fort William and Inverness. It commences immediately north of Tullichewan Roundabout in Alexandria leading generally northwards for a distance of 243 kilometres to its junction with the A9 at (but excluding) Longman Roundabout in Inverness. The A82 is predominantly single carriageway along its length, with some lengths of '2+1' carriageway.

Road drainage and the water environment

The A82 within the scheme extents spans Allt Fionn Ghlinne/Sput Ban/Allt Oss (ID: 10168), which is a classified waterbody by the Scottish Environment Protection Agency (SEPA) under the Water Framework Directive 2000/60/EC (WFD) (SEPA Water Classification Hub). SEPA recorded an overall status of 'Poor' for this watercourse in 2022.

The River Falloch (u/s Dubh Eas) (ID: 10166), which is a classified waterbody, flows parallel to the scheme extents, 20m east at its nearest point to the scheme. SEPA recorded an overall status of 'Moderate' for this watercourse in 2022.

Several minor waterbodies (considered to be tributaries or drainage ditches) lie within 300m of scheme extents, with some culverted below the A82 carriageway within the scheme extent.

The scheme is underlain by the 'Cowal and Lomond' groundwater body, which was classified by SEPA in 2022 as having an overall status of 'good' (SEPA Water Classification Hub). This groundwater body is also recorded as a Drinking Water Protected Area (DWPA) (Ground) (Scotland's Environment).

Areas of the A82 carriageway within scheme extents are recorded as being at low (0.1% chance of flooding each year) to medium (0.5% chance) risk of fluvial flooding (SEPA Flood Maps).

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 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

There is potential for minor, temporary visual impacts to the local landscape during the construction phase as a result of obstructed views due to vehicles and machinery. Although the scheme is located within LLTNP, works will be restricted to the A82 carriageway boundary, will be limited to the like-for-like replacement of the carriageway, and will be temporary in nature. LLTNP will be notified prior to works commencing.

Land use will not change as a result of the works, and the works will not result in any residual change to the visual amenity of the local landscape. 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

Loch Lomond Woods SAC is located 700m southwest of the scheme and Glen Etive and Glen Fyne SPA lies 180m west of the scheme. A Habitats Regulations Appraisal (HRA) was carried out to assess potential impacts of the works on the qualifying features of these designated sites. No Likely Significant Effects (LSE) have been identified on the qualifying features of either site due to the following factors:

- No works will take place within the boundaries of the SAC or SPA.
- The works will be highly localised to the A82 carriageway, screened from the wider environment by roadside tree belts and will move progressively along the full scheme extent over a short period of time (3 days).

- The noise levels during works will not differ significantly from existing noise levels on the A82 due to traffic, which protected species in the area are likely habituated to.

- Standard good practice measures will be in place to prevent pollution to the surrounding environment.

During road resurfacing, 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.

All works will be restricted to the A82 carriageway surface and will not entail any vegetation clearance or works within the soft verge. There are no earthworks associated with the scheme, and 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. As such, there is limited potential to spread or introduce INNS, invasive native perennials, or injurious flowering plant species. In addition, no INNS have been recorded on NBN or AMPS within the scheme extents.

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:

- 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 shall 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 resurfacing 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.

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 daytime working pattern, and no residential or commercial properties lie within 300m of the works. 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.
- 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. 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. Some access points are located within the scheme extent, however local access will be granted where required. There are no residential or commercial properties located within 300m of the works, and road users and local bus operators will be informed of works through a media release, which will provide details of construction dates and times. The works will be of limited duration and will move progressively along the full scheme extent. With the following mitigation measures in place, the risk of significant impacts on population and human health is considered to be low:

- Notification will be issued to 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 daytime works to night-time works) will be communicated.
- Appropriate provisions / measures will be implemented within the traffic management to allow the safe passage of NMUs of all abilities through the site.
- In the event of bus stop closures, appropriate alternative bus stops will be set-up outwith traffic management, which will be clearly signed and fully accessible.
- 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

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

- The scheme will not entail any in-stream 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.
- No discharges into any watercourses or drainage systems are permitted. Appropriate containment measures will be in place to prevent any loss of construction materials into the water environment.
- 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 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

Small areas of the A82 carriageway within the works location are recorded as being between low risk (0.1% chance each year) and high risk of (10% chance each year) of flooding. Works will be programmed as far as is reasonably practicable to avoid periods of adverse weather or heavy rainfall.

Works are restricted to the made ground of the A82 carriageway and traffic management will be designed in line with existing guidance. TM will consist of daytime lane closures with a convoy working. 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 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 Stirling Council Planning Portal (Map Search) identified no approved planning applications within 300m of the scheme.

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 Scotland 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.

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 situated in whole within the LLTNP 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 restricted to the 0.52ha of existing carriageway.
- Works are restricted to like-for-like replacement of worn road surface, with all works restricted to made-ground on the A82 carriageway.
- The works will be temporary, transient, localised, and completed during daytime hours on a rolling programme.
- Works are not expected to result in significant disturbance to protected species that may be present in the wider area.
- The risk of major accidents or disasters is considered to be low.
- By removing the carriageway defects this will provide this part of the A82 carriageway with another life cycle, and significantly improve the ride quality, 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. The works are expected to result in positive impacts on road users during the operational phase.
- As the works will be limited to the like-for-like replacement of the structural components, 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.

Location of the works:

- The scheme will be located within the existing A82 road boundary (carriageway surface) and as such, no land take will be required.
- The scheme extent is located within LLTNP, which will be notified of the proposed works.
- There are no GCRS or a geologically designated SSSI within 300m of the scheme.
- Loch Lomond Woods SAC and Glen Etive and Glen Fyne SPA lie within 2km of the scheme. An HRA was carried out which did not identify any LSE on the qualifying features of the SAC or SPA as a result of the proposed works.
- The scheme does not lie within any sites of historical, cultural, or archaeological significance.
- The scheme lies within a rural area with no residential properties or commercial premises within 300m.
- The site compound will be located on made ground within TM.

Characteristics of potential impacts of the works:

- 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.
- Residual impacts are considered to be beneficial for the travelling public which may use this stretch of carriageway. In addition, improved road surface will reduce the noise levels from travelling public and in turn will reduce disruption to the receptors located in proximity to the scheme.
- The SEMP will include plans to address environmental incidents.
- Mitigation measures detailed above and in the SEMP are put in place with the objective to prevent and, if required, subsequently control any potential impacts on sensitive receptors.
- In the event that INNS are found on site, measures to prevent potential INNS spread will be implemented.
- No in-combination effects have been identified.

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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