

Environmental Impact Assessment Record of Determination

A84/A85 Lochearnhead

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Project Details

Description

BEAR Scotland has been commissioned by Transport Scotland to undertake resurfacing works along two sections of the A84 and A85 trunk roads, covering lengths of 616m and 450m respectively. Carriageway resurfacing will involve the milling out and replacement of bituminous material (depths to be confirmed). Drainage maintenance and renewal of road markings and road studs.

Main plant will include pavers, planers, excavators, and rollers. Heavy goods vehicles (HGVs) will be required for transport of materials and wastes.

The resurfacing package of works will include:

- Set up traffic management (TM) and mark out site.
- Mill out old surface course.
- Reset and/or replace roadside gullies where required
- Lay new surface course.
- Roll surface and allow it to go set.
- Install road markings and studs.
- Drainage works.
- Remove TM and open road.

The works comprise two resurfacing schemes: A85 Lochearnhead (East of A84 Junction) and A84 South of Lochearnhead to Glen Ogle both scheduled for delivery within the 2025/2026 financial year. The first scheme is currently programmed to commence on 13th November 2025, with the combined works expected to last eleven nights. All works will be undertaken during nighttime hours (19:00–06:00). However, changes to the programme may result in revised start dates or working hours.

Traffic Management (TM) for works on A84 section will involve single lane closures with two-three-way temporary traffic lights and a convoy system in place. TM for works on A85 section will involve full road closure with regular amnesties. Access to junction and private roads will be maintained. 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

Both schemes lie within the village of Lochearnhead, in Stirling Council administrative area (Figure 1). The schemes have the following National Grid References (NGRs):

- A84 South of Lochearnhead to Glen Ogle: NN 58912 23610 to NN 58666 24127
- A85 Lochearnhead (East of A84 Junction): NN 59636 23791 to NN 59203 23822



Figure 1. Scheme location/extents (A84 red markers / A85 green markers)

Description of local environment

Air quality

There are no <u>Air Quality Management Areas</u> (AQMAs) within 10km of the scheme extents.

There are no registered sites on the <u>Scottish Pollutant Release Inventory (SPRI)</u> located within 10km of the schemes.

There are no Air Quality Monitoring Stations (<u>AQMS</u>) within 10km of the scheme extents.

Baseline air quality is likely to be primarily influenced by traffic travelling along the A84/A85 carriageways; with secondary sources derived from nearby land management activities and urban activities associated with Lochearnhead.

Cultural heritage

The following cultural heritage features are recorded within 300m of the schemes (PastMap):

Category C Listed Building 'Lochearnhead, Village Shop on A84' (ID: LB50344) lies 10m west of the scheme.

Category B Listed Building 'Lochearnhead, Auchraw Terrace, Wester Auchraw Croft' (ID: LB4172) lies 60m north of the scheme.

Category B Listed Building 'Lochearnhead, Former Railway Viaduct Over the Ogle Burn' (ID: LB4170) lies 110m east of the scheme.

Category C Listed Building 'Lochearnhead, Bridge on A65 Over Ogle Burn' (ID: LB47554) lies 140m east of the scheme.

Category B Listed Building 'Lochearnhead, Briar Cottage' (ID: LB4173) lies 280m east of the scheme.

Category B Listed Building 'Lochearnhead, St Angus Episcopal Church' (ID: LB44186) lies 300m south of the scheme.

Of lesser Cultural Heritage value, numerous National Records of the Historic Environment (NHREs) and Historic Environment Records (HERs) lie within 300m the

scheme. The closest of these is HER 'Lochearnhead' (ID: 66004), which is a milestones and lies within the scheme extents.

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

Landscape and visual effects

The scheme is located wholly within the Loch Lomond and the Trossachs National Park (LLTNP) (Site ID: <u>8621</u>) which is designated for 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 within a National Scenic Area (NSA) or any other site designated for its landscape and visual character (<u>SiteLink</u>).

The Landscape Character Type within the schemes is recorded as 'LCT 254 - Straths and Glens with Lochs' and 'LCT 252 – Upland Glens, Loch Lomond & the Trossachs' (NatureScot) which have the following key characteristics:

LCT 252 – Upland Glens, Loch Lomond & the Trossachs

- 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 southfacing) 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.
- 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.

LCT 254 – Straths and Glens with Lochs

- Strongly enclosed by steep and often rugged hill slopes with lochs filling much of the space between, leaving only a narrow flatter margin against the loch shore.
- Lochs generally long and narrow.
- Narrow passes occur between some lochs. Subtle promontories and narrow beaches feature on loch shorelines, – these particularly appreciated in long views down the length of the lochs. Modification of natural lochs and water catchments in the park, giving rise to a variety of structures including dams and aqueducts – many of these comprise distinctive 19th Century structures.
- Settlements often located at the head of lochs and major through roads are aligned through some of these glens and straths.
- Scattered traditional dwellings or clusters of buildings usually located close to alluvial pastures at the intersection with side glens and water courses on some loch shores.
- Tourism and recreation facilities along loch shores.
- Highland-type designed landscapes, grand houses, hunting lodges and associated features, policies and parklands occupy prime loch shore positions. Pier and timber boat houses are a common feature in association with houses and estates particularly on Loch Ard.
- Lochs are highly visible, with roads and cycle/walking routes aligned close to their shores.
- Long views are possible across open water to the Highland Summits, and the combination of craggy towering hills and smooth water is an essential component of the scenic richness of the National Park.

The A84 Trunk Road, within the North West, connects Stirling with Doune, Calendar and Lochearnhead. It commences from its junction with the M9 at and including the eastern most roundabout at Craigforth Stirling (M9 Junction 10) leading generally

north-westwards for a distance of 44.7 kilometres to its junction with the A85 in Lochearnhead. The A84 is a single carriageway along its length.

The A85 Trunk Road, within the North West, connects Perth with Crianlarich and Tyndrum to Oban. The Perth to Crianlarich section commences at the Crieff Road Roundabout within Perth (including the roundabout) leading generally westwards for a distance of 81 kilometres to (but excluding) the A85 / A82 Crianlarich Roundabout. The Tyndrum to Oban section commences at the A82 / A85 Tyndrum junction leading generally westwards for a distance of 57 kilometres to its junction with the A816 within Oban (excluding the roundabout at Argyll Square). The A85 is a single carriageway along its length.

Biodiversity

There are no European designated sites (i.e. Special Protection Areas, Special Areas of Conservation, Ramsar sites) within 2km of the scheme extents (SiteLink).

There are no Local Nature Conservation Sites (LNCS), Sites of Special Scientific Interest (SSSI) or Local Nature Reserves (LNRs) within 300m of, or which share connectivity with, the scheme extents (<u>SiteLink</u>).

The <u>National Biodiversity Network (NBN) Atlas</u> holds several records of bird species within 2km of the schemes (the search criteria included only records during the past ten years, and which have open-use attributions (OGL-CC0-CC-BY)). Under the Wildlife and Countryside Act 1981 (as amended), all wild birds and their active nests are protected, with certain species receiving additional protections.

The NBN Atlas holds no records of injurious or invasive weeds (as listed in the Network Management Contract (NMC)) under the same search criteria.

The Transport Scotland's Asset Management Performance System (AMPS) holds one record of common ragwort (*Jacobae vulgaris*) and rosebay willowherb (*Chamaenerion angustifolium*) within 300m of the A85 scheme, with none recorded in proximity to the A84 scheme extents.

Habitat in the surrounding area is dominated by grazing pastures, freshwater habitat, mixed woodland, including forestry plantations, and residential settlements.

Woodland listed on the <u>Ancient Woodland Inventory (AWI)</u> as ancient (of semi natural origin) lies 200m northeast of the scheme extents.

There are no <u>Tree Preservation Orders (TPO's)</u> designated by LLTNP within 300m of the schemes.

Geology and soils

There are no Geological Conservation Review Sites (GCRS's) or SSSI's designated for geological features within 300m of the schemes (<u>SiteLink</u>).

Superficial deposits within the scheme extents consist of Till and Morainic Deposits (diamicton, sand and gravel). Bedrock geology within the scheme extents is comprised of Loch Tay Limestone Formation (Metalimestone) and Pitlochry Schist Formation (psammite and semipelite) (BGS Geology Viewer).

Component soils within scheme extents are humus-iron podzols with peaty gleys (Scotland's Soils).

Soils in the area around the scheme extent are comprised of Class 0 mineral soils, and peatland habitats are not typically found on such soils (<u>Carbon and Peatland Map 2016</u>).

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 resurfacing works are required to replace the worn surface and general maintenance of the A84/A85 trunk roads, requiring binder inlay, and reinstallation of road markings. 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 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 Scottish Environment Protection Agency (SEPA), as described in Schedule 3 of the Waste Management Licensing Regulations 2011.

If coal tar—bound material is encountered, opportunities for recycling or recovery will be explored where feasible and in accordance with current regulatory guidance.

Where recycling is not practicable, the contaminated road planings will be classified and managed as Special Waste in compliance with the Waste Management Licensing (Scotland) Regulations 2011. Special waste consignment notes (SWCN) will be obtained from SEPA to allow the movement of the contaminated planings. Coal tar contaminated road planings will be transported by a registered waste carrier to an appropriate waste recovery facility, and SEPA will be notified prior to the Special Waste leaving site.

The value of the schemes do not exceed £350,000; therefore, a Site Waste Management Plan (SWMP) is not required.

No site compound is required for these works. Storage of plant and equipment will be within the TM on the A84/A85 carriageways.

Noise and vibration

The works do not fall within a Candidate Noise Management Area (CNMA) as defined by Transport Scotland's Transportation Noise Action Plan (<u>TNAP</u>) 2019-2023.

Modelled noise data from Environmental Noise Directive (END) Round 4 Noise Mapping for the A84/A85 at the scheme extent shows that the day, evening and night levels (Lden) fall between 59-62dB (Scotland's Noise).

Baseline noise levels are likely to be primarily influenced by traffic travelling along the A84/A85 carriageways with secondary sources derived from nearby land management activities and urban activities associated with Lochearnhead.

Population and human health

The scheme lies in the village of Lochearnhead with numerous residential (approximately 100) and commercial properties within 300m of the schemes. The nearest of these is a residential property 'Tigh na Crich' and lies directly adjacent to the carriageway with no acoustic or visual screening from the scheme extents. Several access points to local roads and properties lie within the scheme extents.

Sections of paved pedestrian footpaths lie adjacent to both carriageways within the scheme extents. Numerous bus stops and parking facilities lie adjacent to the carriageways within the scheme extents.

National Cycle Network Route 7 (<u>National Cycle Routes</u>) lies parallel to the A84 carriageway west of the scheme at a distance of 290m.

Two walking routes designated by <u>WalkHighlands</u> 'Craeg Mac Ranaich and Meall an t-Seallaidh' and 'Glen Ogle Trail, Lochearnhead' utilise paved pedestrian footpaths within both scheme extents.

Starting points to five <u>Core Paths</u> lie along the A84/A85 carriageways within scheme extents, all of which lead away from the carriageway.

In 2024, Traffic Scotland recorded an average daily traffic (ADT) of 3,608 vehicles on the A85, approximately 2 – 3km southwest of the scheme extents (Site: ATC06003 A84(T) Leitters Farm [16225 A84T 76]), of which 9.7% were heavy goods vehicles (HGVs).

TM for works on the A84 section will involve single lane closures with two-three-way temporary traffic lights and a convoy system in place. TM for works on the A85 section will involve a full road closure with regular amnesties.

Road drainage and the water environment

Loch Earn (ID: 100251) lies 10m south of the scheme extents at its closest point and was classed by the Scottish Environment Protection Agency (SEPA) under the Water Framework Directive (WFD) as having an overall condition of 'moderate' in 2023 (SEPA).

The River Ogle (ID: 6824) at its nearest lies 110m southwest of the scheme. The River Ogle classed by SEPA under the WFD as having an overall condition of 'high' in 2023 (SEPA).

Several minor watercourses (unclassified by SEPA), including tributaries and drainage ditches, are culverted beneath the A85/A84 within the scheme extents and are located within 300 m of the proposed works.

<u>SEPA Flood Map</u> has highlighted a high risk of river flooding and surface water and small watercourse flooding within the scheme extents (i.e. 10% chance of flooding each year).

Climate

The <u>Climate Change (Scotland) Act 2009</u> ('The Act'), and its subsequent amendment under the <u>Climate Change (Emissions Reduction Targets) (Scotland) Act 2019</u>, sets the framework for the Scottish Government to address climate change. The Act has an ambitious target to reach Net Zero greenhouse gas emissions by 2045, with any residual emissions balanced by removing carbon

dioxide from the atmosphere. This is five years earlier than the rest of the UK due to the greater potential for carbon sequestration in Scotland.

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

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

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

Policies and plans

This Record of Determination has been undertaken in accordance with all relevant regulations, guidance, policies and plans, notably including the Environment and Sustainability Discipline of the Design Manual for Roads and Bridges (<u>Design Manual for Roads and Bridges (DMRB)</u>) and Transport Scotland's Environmental Impact Assessment Guidance (<u>Guidance - Environmental Impact Assessments for road projects (transport.gov.scot)</u>).

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 the air are considered to be low.

- A water-assisted dust sweeper will sweep the carriageway after dust-generating activities, and waste will be contained and removed from site as soon as is practicable.
- Materials that have a potential to produce dust will be removed from site as soon as possible, and vehicles that remove waste from site will have sheeted covers.
- Ancillary plant, vehicles, and non-road mobile machinery (NRMM) will have be regularly maintained, paying attention to the integrity of exhaust systems.
- Ancillary plant, vehicles and NRMM will be switched off when stationary to prevent exhaust emissions (e.g., there will be no idling vehicles).
- Cutting, grinding, and sawing equipment (if required) will be fitted or used in conjunction with suitable dust suppression techniques e.g., local exhaust ventilation system that fits directly onto tools.
- Regular monitoring (e.g., engineer or Clerk of Works) will take place when
 activities generating air pollution are occurring. In the unlikely event that
 unacceptable levels of air pollution are emanating from the site, the operation will,
 where practicable, be modified and re-checked to verify that the corrective action
 has been effective. Actions to be considered include: (a) minimising cutting and
 grinding on-site, (b) reducing operating hours, (c) changing the method of
 working, etc.
- All delivery vehicles carrying material with dust potential will be covered when travelling to or leaving the 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 also be stored on made ground.
- Any stockpiled material on site will be monitored daily to ensure no risks of dust emissions exists.
- Good housekeeping will be employed throughout the work.

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

Although there are a number of Listed Buildings in proximity to the scheme and a feature of minor cultural heritage interest within the scheme and within 300m of the scheme. The works do not require excavation with only minor excavation of silted road drainage system where required. Therefore, the potential for exposure of unrecorded cultural heritage features is considered to be negligible. Construction of the A85 road corridor is also likely to have removed any archaeological remains that may have been present.

As standard, 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 NW Environment Team contacted for advice. Historic Environment Scotland (HES) will be notified as required.
- People, plant, and materials will, as much as is reasonably practicable, only
 be present on areas of made / engineered ground. Where access out with
 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. There will be no storage of vehicles, plant, or materials
 against any buildings, walls or fences.

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

The works lie within the boundary of the LLTNP. However, the works are like-for-like general maintenance of the trunk road surface and as such the works will not have an impact of the landscape character associated with the LLTNP. The National Park Authority will be notified of the works prior to the construction commencing.

There will be a short-term impact on the landscape character and visual amenity of the site as a result of the presence of construction plant, vehicles, and TM. However, the works are of a short duration (up to eleven nights combined), undertaken during night-time hours (19:00 – 06:00) and restricted to the A84/A85 carriageway boundary. 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.

In addition, 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, minimising the landscape and visual effects as much as possible.
- LLTNP advice, if received, will be complied with.
- Works will avoid encroaching on land and areas where work is not required or 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.
- The site will be left clean and tidy following construction.

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

Biodiversity

All works will be restricted to the A84/A85 carriageway surfaces and will not entail any in-stream works or vegetation clearance. There are no significant earthworks associated with the scheme (only minor excavation associated with drainage works), 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 invasive non-native species (INNS), invasive native perennials, or injurious flowering plant species.

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. However, works are restricted to the carriageway boundaries and the number of construction vehicles and construction operatives required onsite is low given the scale and scope of the works. In addition, any species in the area are likely to be accustomed to noise and

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visual disturbance pertaining to vehicle movements on the A84/A85 and the scheme is of short duration (up to eleven nights combined) and will be undertaken on a rolling programme. The potential for significant species disturbance within the area of construction is therefore considered to be low.

Pollution controls and good practice measures to reduce impacts of works on the local environment will be detailed in the Site Environment 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:

- No in-water works will be permitted. Works will be strictly limited to areas required for access and to carry out the works. Unnecessary encroachment onto terrestrial or aquatic areas will not be tolerated.
- All construction operatives will be briefed through toolbox talks prior to works commencing, which will be included in the SEMP. The toolbox talks will provide information on the legislation, general ecology, and best practice measures for relevant protected species.
- 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 will be reported to the BEAR Scotland Environmental Team.
- Artificial lighting (where required) will be directed away from areas of woodland and waterbodies as far as is safe and reasonably practicable.
- If an active bird nest (e.g., eggs or young present, adult sitting on nest) is identified on site, all works within 30m of the nest will stop until the BEAR Scotland NW Environment Team can provide advice.
- A 'soft-start' will be implemented on site each day. This will involve switching on vehicles and checking under/around vehicles and the immediate work area for mammals prior to works commencing to ensure none are present and that there is a gradual increase in noise.
- Any excavations, exposed pipes/drains, or areas where an animal could become trapped (e.g. storage containers) will be covered over when not in use, at the end of each shift, and following completion of the works to avoid animals falling in and becoming trapped.
- 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

n instances where coal tar is identified within the existing road surfacing, options for recycling through thermal treatment or encapsulation into asphalt will be assessed prior to landfill disposal. The suitability of recycling methods will be determined based on feasibility, informed by the results of material testing and site-specific conditions.

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 the 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.
- Road 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 must 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 be available for inspection. A copy of the Duty of Care paperwork will be produced and filed appropriately in accordance with the Code of Practice (as made under Section 34 of Environmental Protection Act 1990 as amended).
- If coal tar is identified within the scheme extents, suitable recycling methods will be prioritised. In instances where recycling is not possible, coal tar will be processed as follows:
 - Any coal tar contaminated road planings will be classified as Special Waste.
 - Special waste consignment notes (SWCN) will be obtained from SEPA to allow the movement of the contaminated planings.
 - Coal tar contaminated road planings will be transported by a registered waste carrier to an appropriate waste recovery facility.
 - SEPA will be notified at least 72 hours before (and no longer than one month before) Special Waste leaving site.
- 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.
- Where applicable, all temporary signage will be removed from site on completion of the works.

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 scheme have the potential to cause noise and vibration impacts through the use of equipment and construction vehicles for the proposed activities. However, the works are not located within a CNMA or CQA and the proximity of road space suggests that residents within the local area will have a degree of tolerance to noise and disturbance. Works will be completed over eleven nights on a rolling programme, with the aim being to complete the noisiest works (e.g. planing) by 23:00. Works with the potential to induce worst-case scenario noise and vibration will also be intermittent, temporary, transient and short-lived. Due to the short duration and localised nature of the works,

the proposed schemes are anticipated to result in temporary minor noise impacts during the construction programme.

The road surface is in a poor condition, with a series of defects. Replacing the life-expired surface course with TS2010 road surfacing affords the benefits of a reduction in mid-to-high frequency traffic noise and a reduction in ground vibrations. As a result, upon completion of the work, noise associated with the movement of vehicles on the trunk road should decrease post construction.

The following mitigation measures will be put in place:

- Local residents which are affected by the works will be notified in advance of the works, likely by a letter drop, which will contain details of the proposed timings and duration of the works, in addition to contact details for the Site Supervisor.
- The Environmental Health Officer (EHO) for Stirling Council will be notified of the works.
- The Best Practicable Means, as defined in Section 72 of the Control of Pollution Act 1874, 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 staff will receive the 'Being a Good Neighbour' toolbox talk.
- Where possible and where works will take place within 300m of residential properties and other sensitive receptors, the noisiest work operations (e.g., cold milling, using breakers (jackhammers), chipping hammers, use of rollers, etc.) will be completed before 23:00.
- 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.
- Drop heights from vehicles and NRMM will be kept to a minimum to minimise noise when unloading.
- All plant, machinery and vehicles will be switched off when not in use.
- 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 have the potential to have temporary adverse impacts on local residents, vehicle travellers, and NMUs. TM for works on A84 section will involve single lane closures with two-three-way temporary traffic lights and a convoy system in place. TM for works on A85 section will involve full road closure with regular amnesties. In the event of local access restrictions to residential properties, access will be granted as requested. Access to NMU facilities which lie within 300m of the schemes, will be maintained and the works are being undertaken at night when footfall and cyclist count is at its lowest.

Numerous residential properties are found within 300m of the scheme. The nearest residential property lies directly adjacent to the scheme extents with no screening present and given that the works are being undertaken at night, there is potential for disturbance from noise, vibration and the additional construction lighting.

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

- The works schedule and any changes to this will be communicated to local residents prior to and throughout the programme.
- Construction lighting will consider the need to avoid illuminating surrounding environment and properties to avoid a nuisance at night, and non-essential lighting will be switched off at night.
- Local access will be granted as required.
- Appropriate provisions / measures will be implemented within the traffic management to allow the safe passage of NMUs of all abilities through the site.
- Journey planning information will be available for drivers online at the trafficscotland.org website. Journey planning information will also be available for drivers online through BEAR's social media platforms.

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

Road drainage and the water environment

There is potential for temporary impacts on the water environment due to operation of plant within and within proximity to watercourses and/or drainage systems, which may lead to 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).

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

The works may result in potential direct or indirect effects on surrounding waterbodies. The following mitigation measures will be put in place to reduce the risk of pollution incidents as a result of works:

- No work has been identified that would require entering any surface waterbodies.
 If such a need were identified onsite, BEAR Scotland's Environmental Team will be contacted (before the works commence) to allow consideration of potential environmental effects.
- Standard working practices to comply with The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) for works in or near water will be detailed in the SEMP and adhered to on site.
- No discharges into any watercourses or drainage systems will be permitted.
 Appropriate containment measures will be in place to prevent any loss of construction materials into the water environment.
- Appropriate measures will be implemented during resurfacing operations to limit
 the potential for wastes (i.e., road planings) and materials (i.e., new asphalt) to
 enter any gullies present on site. On completion of resurfacing operations, any
 gullies present on site will be visually checked to ensure they have not become
 blocked as a result of the scheme.
- An incident response (contingency) plan will be put in place to reduce the risk from pollution incidents or accidental spillages. All necessary containment equipment, including suitable spill kits (for oil and chemicals) will be available on site, quickly accessible if needed, and staff trained in their use.
- All spills will be logged and reported. In the event of any spills into the water environment, all works will stop, and the incident will be reported to the project

manager and the BEAR Scotland Environmental Team. SEPA will be informed of any such incident as soon as possible using the SEPA Pollution Hotline.

- All plant and equipment will be regularly inspected for any signs of damage and leaks. A checklist will be present to make sure that the checks have been carried out.
- Storage of hazardous material, oil and fuel containers will be distanced more than 10m away from any watercourses.
- If required, a designated refuelling area will be identified. Fuel bowsers will be stored on an impermeable area and 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 shall 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 will 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.
- The works will utilise the use of Warm Mix Asphalt (WMA) for binder layer in favour of Hot Mix Asphalt (HMA).
- All mitigation measures detailed within 'Air Quality' and 'Material Assets and Waste' will be adhered to.
- Local contractors and suppliers will be used as far as practicable to reduce fuel use and greenhouse gas emitted as part of the works.

Where possible, materials will be sourced locally to reduce greenhouse gas
emissions associated with materials movement, and waste will be removed to a
local facility, where required.

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

Areas within the scheme extents are recorded as being at a high likelihood (10% chance each year) of river and surface water (and small watercourse) flooding each year. Works will be programmed as far as is reasonably practicable to avoid periods of adverse weather or heavy rainfall. There will be no increase to the likelihood of flooding on the A84/A85 within the scheme extents upon completion of the works.

Works are restricted to areas of engineered ground of the A84/A85 trunk roads and traffic management will be designed in line with existing guidance. TM will consist of night-time lane closure with temporary traffic lights on the A84 section and full road closures with amnesties on the A85 section. Local residents will be notified of working hours and provided with appropriate contact information. Pedestrians or other NMUs will be accommodated within the traffic management setup.

A Traffic Management Plan (TMP), which includes measures to avoid or reduce disruption to road traffic, will be produced in accordance with the Traffic Signs Manual (Department of Transport 2009). The TMP will ensure that there is no severance of community assets, access routes or residential development.

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

Assessment cumulative effects

The proposed works are not anticipated to result in significant environmental effects. Due to the nature of the proposed works, no cumulative effects are anticipated with any other developments in the vicinity.

A search of the <u>LLTNP Planning Portal</u> identified one approved planning application within 300m of the schemes, which has been approved for the erection of a two storey extension to a property (Ref. 2025/0106/HAE). This property is accessed via a local road and as proposed works will take place during night time working hours, it is unlikely to result in any cumulative effects.

Environmental Impact Assessment Record of Determination Transport Scotland

A search of the Scottish Road Works Commissioner website (Scottish Road Works Online) has not identified any other roadworks that are currently ongoing, or noted as being planned, on the trunk road at the same time as this scheme.

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 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 Loch Lomond and the Trossachs National Park which is a sensitive area within the meaning of regulation 2(1) of the Environmental Impact Assessment (Scotland) Regulations 1999.

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

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

Characteristics of the scheme:

- Works are restricted to like-for-like replacement of worn road surface, with all works restricted to the man-made ground on the A84/A85 carriageway surfaces.
- Construction activities are restricted to 616m and 450m long sections along A84 and A85, with working areas of 0.43ha and 0.27ha respectively.
- The works will be temporary, transient, localised, and completed during night-time hours on a rolling programme over eleven nights in total.
- 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 A84/A85 carriageways with another life cycle, and significantly improve the ride quality, which will result in safer conditions for road users.
- No impacts to 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 the environment.

Location of the scheme:

- There are no European designated sites (i.e. Special Protection Areas, Special Areas of Conservation, Ramsar sites) within 2km of scheme extents.
- The scheme will be located within the existing trunk road boundaries and as such, no land take will be required.
- The works will not result in any change to the qualifying features of Loch Lomond and the Trossachs National Park in which the scheme is situated.
- The works will not restrict access to nearby residential properties.

Characteristics of potential impacts of the scheme:

- Any potential impacts of the works are expected to be temporary, short-term, non-significant and limited to the construction phase.
- Measures will be in place to ensure appropriate removal and disposal of waste.
- No impacts on the environment are expected during the operational phase as a result of works. The works are expected to result in positive impacts on road users, ecological and human receptors during the operational phase.
- As the works will be limited to the like-for-like replacement of the carriageway surface 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.
- Works are programmed to be of short duration and night-time works will be completed on a rolling programme, with the aim being to complete the noisiest works by 23:00.
- Mitigation measures detailed above (and in the SEMP) will be put in place with the objective to prevent and, if required, subsequently control any potential impacts on sensitive receptors.

Annex A

"Sensitive area" means any of the following:

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



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