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Environmental Impact Assessment Record of Determination

A83 Arrochar and A83 Arrochar to River Loin - Resurfacing

Contents

Project Details

Description

BEAR Scotland has been commissioned by Transport Scotland to undertake resurfacing works on two consecutive sections of the A83 trunk road with a combined length of 1,683m (A83 Arrochar: 931m; A83 Arrochar to River Loin: 752m). Carriageway resurfacing will involve the milling out and replacement of up to 210mm of bituminous material and drainage maintenance works (filter drain replacement and renewal of gullies). Following the resurfacing works, road markings and studs will be reinstated.

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

The package of works will include:

- Set up traffic management (TM) and mark out site.
- Mill out old surface course.
- Lay new surface course.
- Roll surface and allow it to go off.
- Renew filter drains and reset gullies.
- Install road markings and studs.
- Remove TM and open road.

The works comprise two schemes - A93 Arrochar and A83 Arrochar to River Loin - located consecutively along the A83. Both schemes are currently programmed for delivery within the 2025/2026 financial year, with construction planned to run consecutive. The works are scheduled to commence on 01/02/2026 and are expected to last for 25 nights, utilising a night-time working pattern (19:00 to 06:00). Changes in the programme may result in a change to the proposed working hours/commencement dates.

Traffic Management (TM) will include full road closure with amnesties. The TM strategy will be in line with recommendations and guidance in The Traffic Signs Manual Chapter 8 (Traffic Signs Manual Chapter 8). 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 amendment to the exact TM requirements.

Location

The schemes are located on a stretch of the A83 trunk road within the village of Arrochar situated in Argyll & Bute Council (Figure 1). The scheme extents lie immediately adjacent to one another, compromising the A83 Arrochar section (Figure 2) and the A83 Arrochar to River Loin section (Figure 3). The schemes have the following National Grid Reference (NGR):

- Scheme start point NGR: NN 30288 04129
- Scheme end point NGR: NN 29720 05014

Figure 1. A83 Arrochar and A83 Arrochar to River Loin scheme location

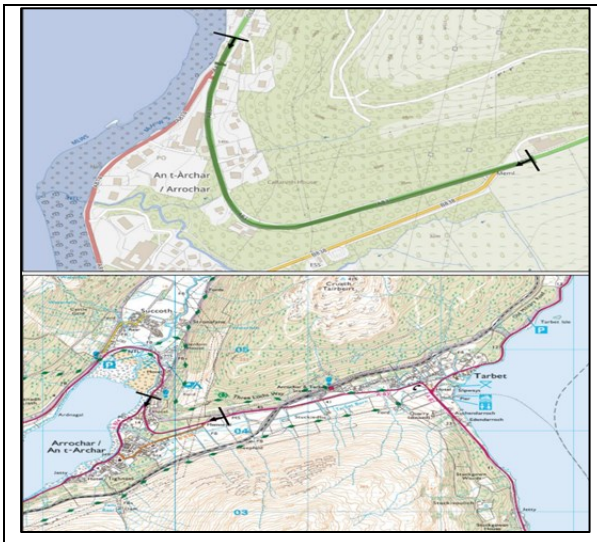

Figure 2. A83 Arrochar scheme extent

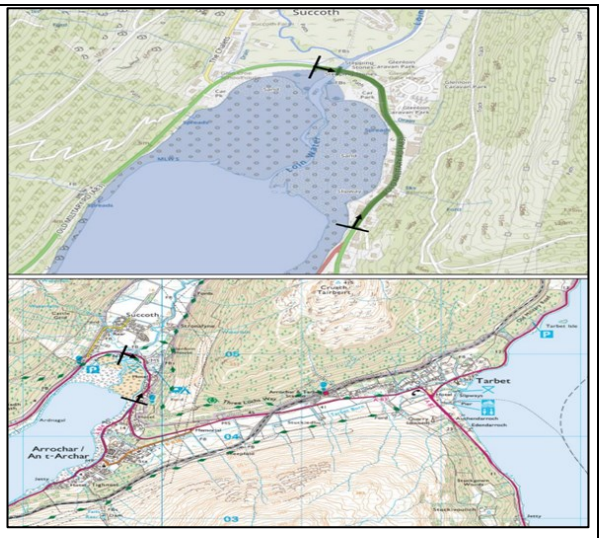

Figure 3. A83 Arrochar to River Loin scheme extent

Description of local environment

Air quality

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

No Air Quality Management Areas (AQMA) (Air Quality Management Areas) are located within 10km of the scheme.

There are no air quality monitoring stations located within 10km of the proposed works (Scottish Air Quality).

There are no air pollutant release sites registered on the Scottish Pollution Release Inventory (SPRI) located within 10km of the scheme (Scottish Pollution Release Inventory).

The nearest Transport Scotland manual data counter (site name ATC08090) lies within the scheme extent and recorded an annual daily total (ADT) count of 5,226 motor vehicles in 2024, of which 18.2% were heavy goods vehicles (HGVs).

Baseline air quality in the study area is mainly influenced by vehicles travelling along the A83 trunk road. Secondary sources are derived from day-to-day rural village activities and local land management within the area.

Cultural heritage

There are no Scheduled Monuments, Garden & Designed Landscapes, Conservation Areas, Battlefields or World Heritage Sites found within 300m of the scheme extent (Pastmap).

Multiple features of cultural heritage interest lie within 300m of the scheme. Several Listed Buildings are within 300m of the scheme. The following Listed Building is located closest to the scheme,

- *'Arrochar Glenloin House with Icehouse and Gate piers'* (ref LB43182) lies approximately 150m northeast from the A83 carriageway.

Records of lesser cultural heritage importance noted on the National Records of the Historic Environment (NRHE) and Historic Environment Record (HER) databases, were also noted within 300m of the scheme, those located within or adjacent to the scheme are listed below:

- HER, Walkover Survey: Arrochar Parish, Loch Lomond, Argyll & Bute lies within the scheme extent.
- HER, Dumbarton – Tarbet – Inverary – Tyndrum Military Road, lies within the scheme extent.
- HER, Hidden Heritage Community Archaeology Project: Walkover Survey Arrochar and Tarbet, Argyll lies within the scheme extent.
- HER and NRHE, Arrochar Old Bridge, lies within the scheme extent.
- HER and NRHE, Old Military Shop, lies adjacent to the A83 carriageway.
- HER and NRHE, Old Military Road Tea Room and Shop, lies adjacent to the A83 carriageway.

Construction of the A83 is likely to have removed any archaeological remains that may have been present within the area.

Landscape and visual effects

The schemes fall within Loch Lomond and the Trossachs National Park (LLTNP) (NatureScot Site code: 8621) which is designated for the following special general 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 Landscape Character Type within the schemes is recorded as 'Steep Ridges and Hills' (LCT 250), 'Settled Coastal Fringe' (LCT 265) and 'Highland Summits' (LCT 251) which have the following key characteristics:

Steep Ridges and Hills

- Steep-sided hills, with pronounced summits, which rise dramatically from narrow sea lochs and deep glens.
- Craggier Cowal hills with upper slopes and summits broken with small rocky outcrops and knolls. These hills are deeply cut by glens and straths and by myriad smaller burns.
- Long and narrow sea lochs of Loch Long, and the more sinuous Loch Goil.
- Coniferous forest predominantly covers the lower slopes of the Cowal hills, extending high into narrow glens and merging with broadleaf woodlands.
- Generally smoother Luss Hills forming conical peaks and long narrow ridges and spurs. These hills are more open with only small areas of coniferous forestry on lower slopes.
- Hills often seen in conjunction with the higher Highland Summits.
- Some hills form key landmark featured in views along the sea lochs.
- Settlement largely absent even from the narrow rocky coastal edges along the sea lochs and some parts feel relatively remote. MOD facilities on the fringes influence character in some areas.

Settled Coastal Fringe

- Generally associated with alluvial fans that occur at the mouths of straths and glens or raised beaches.
- Narrow and rocky coastline with shingle beaches and occasional small sandy bays.
- Small areas of saltmarsh and mudflats present at outlets.
- Rocky foreshore commonly modified by road embankments and piers at the core of settlements.
- Subtle promontories, coinciding with areas of alluvial outwash, exaggerated in long views along the coast from roads and the sea lochs and form focal points.
- Areas of farmland on less steeply sloping ground behind and wrapping around, more concentrated areas of settlement.
- Some traces of semi-native oak/birch woodland and pockets of mature policy woodland and tall specimen trees present close to the shore and at the heads of the lochs. Settlements small and often linear in arrangement, confined by steep slopes and the sea.

- Buildings appear very small in relation to the scale of the hills which backdrop them as the full height of the hill is seen without any intervening ground.
- Ruinous buildings and pockets of overgrown pastures present along the coast set amongst dense forest.
- Tourism and recreational facilities key features including chalets, caravan parks and hotels. Views channelled along the shore of the strongly contained sea lochs and across the water to opposite shores.
- Rugged peaks of the *Highland Summits* and *Steep Ridges and Hills* form an essential part of the setting to these settled coastal areas.

Highland Summits

- High mountains generally lying above 800 metres, but lower and intensely craggy in the core of the Trossachs where geology is particularly complex.
- Steep slopes often covered in scree.
- Narrow rocky ridges, deeply scooped corries and rocky gullies on many of these mountains.
- Narrow glens deeply cut into the mountains, often contain fast-flowing burns and waterfalls.
- Strongly patterned landscape with exposed rock, crags, small lochs and myriad water courses significantly increasing complexity.
- Simple vegetation cover is, largely comprising semi-natural grassland with patchy heather and ground-hugging alpine species on upper slopes and summits. Bracken and bog occur on lower slopes and within glen floors. Coniferous forestry present on some lower slopes, extending up into glens.
- Broadleaf woodlands rare, confined to steeper slopes with fragments of oak and birch tracing burns and gullies.
- Very sparsely populated with roads and dispersed settlement occurring only on its fringes.
- Impounded lochs, coniferous forestry and hydroelectric infrastructure and transmission lines close to the mountain's northwest of Loch Lomond.
- Highly visible massive peaks and ridges of the mountains forming a scenic rugged backdrop to the lower settled loch shores, glens and straths.
- Instantly recognisable mountain forms such as the Cobbler and Ben Lomond. Ben Ledi, Ben Vorlich and Ben Lomond are important landmark features, marking the Highland edge seen widely from the Central Lowlands of Scotland.
- Popular mountains with walkers because of their highly natural and rugged character, and the presence of 'Munro' and 'Corbett' peaks. The higher summits offer extensive views.

- Distinct sense of wild character of the summits due to their rugged and natural qualities, especially away from hydro-electric infrastructure and poorly integrated forestry.
- Where snow is held on the high summits and the corries of Ben Lui and Ben Oss long in the year, this accentuates the exposure and wild character.

Land use (HLAmap) within the schemes is classified as:

- Urban area (Arrochar)
- Rough grazing
- Rectilinear Fields and Farms
- Managed woodland
- Recreation area (Glenloin Caravan Park)

The land surrounding the trunk road is classified as 4.2 – 'Land capable of producing a narrow range of crops, primarily on grassland with short arable breaks of forage crops', 6.1 – 'Land capable of use as rough grazing with a high proportion of palatable plants' and 6.2 – 'Land capable of use as rough grazing with moderate quality plants' (Scotland's Soils).

The A83 Trunk Road connects Tarbert with Lochgilphead, Kennacraig and Campbeltown. It commences at the A82 / A83 junction within Tarbert leading generally south-westwards for 158 kilometres to (and including) its junction with New Quay Street at the Campbeltown Ferry Terminal. The A83 is a single carriageway along its length.

Biodiversity

The Loch Lomond Woods Special Area of Conservation (SAC) lies approximately 460m northeast from the A83 carriageway (NatureScot Site Code: 8298).

A Habitats Regulations Appraisal (HRA) has been undertaken to assess the potential effects of the works on the qualifying features of the site. Refer to the Biodiversity Impacts and Mitigation section below for conclusion of the HRA.

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

A search of NBN Atlas identified records of the following invasive non-native species (INNS) (denoted by *) and injurious plant species (as listed in the Network Management Contract (NMC)) using the same search criteria:

- Rhododendron* (*Rhododendron ponticum*)
- Himalayan balsam* (*Impatiens glandulifera*)
- Rosebay willowherb (*Chamerion angustifolium*)
- Broad-leaved dock (*Rumex obstusifolius*)
- Common ragwort (*Jacobaea vulgaris*)
- Curled dock (*Rumex crispus*)

A search of Transport Scotland's Asset Management Performance System (AMPS) holds one record of invasive native perennial plant (as listed in the NMC) within 300m of the scheme.

- Rosebay willowherb - growths have been recorded on the northbound verge within the scheme extent.

Habitat surrounding the A83 carriageway at the scheme extents is dominated by steep sided mountainous terrain with extensive woodland mainly of coniferous tree species, with pockets of rough grazing. Loch Long is located to the southwest of the scheme offering aquatic and riparian habitat.

One area of ancient (of semi-natural origin) woodlands listed on the Ancient Woodland Inventory (Ancient Woodland Inventory) lies approximately 145m east from the scheme beyond the Glenloin Caravan Park.

According to Argyll & Bute Council there are two Tree Preservation Orders (TPOs) located within 300m of the scheme (Argyll and Bute TPO). The closest '*2004/0002/TPO – Woodland at Church Road Arrochar*' covers a group of trees as well as several stand-alone trees, lies approximately 40m southwest from the scheme.

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. 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 a geologically designated SSSI (SiteLink).

Bedrock geology within the scheme extents is listed as:

- Beinn Bheula Schist Formation – Psammite and Pelite. Metamorphic bedrock formed between 1000 and 541 million years ago between the Tonian and Ediacaran periods (BGS Geology Viewer).

Superficial deposits within the scheme extents are listed as:

- River Terrace Deposits 1 – Gravel, sand, silt and clay. Sedimentary superficial deposit formed between 2.588 million years ago and the present during the Quaternary period.
- Till – Diamicton. Sedimentary superficial deposit formed between 2.588 million years ago and the present during the Quaternary period (BGS Geology Viewer).

The local soil type is recorded as peaty gleys with dystrophic semi-confined peat and humus-iron podzols with peaty gleyed podzols (Scotland's Soils).

Soils within the scheme extent are recorded as being 'Class 0', 'Class 3' and 'Class 5' as displayed on Scotland's Carbon and Peatland Map. Class 0 is mineral soil, and peatland habitats are not typically found on such soils. Class 3 is associated with dominant vegetation cover which is not priority peatland habitat. Class 5 is associated with no peatland habitat recorded.

Material assets and waste

The proposed works are necessary to resurface the worn-out carriageway and improve drainage, likely requiring binder inlay, reinstation of road markings, filter drain replacement and renewal of gullies. Materials used will consist of:

- Asphaltic material
- Bituminous emulsion bond coat
- Milled in road studs
- Thermoplastic road marking paint
- P100 Reinforcement Grid

Uncontaminated planings will be recovered for re-use in line with BEAR Scotland's Procedure 126: The Production of Fully Recovered Asphalt Road Planings.

Any coal tar contaminated road planings will be classified as a 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, and SEPA will be notified prior to the Special Waste leaving site.

The value of the scheme does exceed £350,000; therefore, a Site Waste Management Plan (SWMP) is required.

No site compound is required for these works. Storage of plant and equipment will be within the A83 carriageway.

Noise and vibration

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

Works are not located within a Candidate Noise Management Area (CNMA) as defined by the Transportation Noise Action Plan-2019-2023 (Road maps).

Scottish Noise Mapping indicates average noise level during the night (LNGT) ranges between 55 and 65dB within the A83 and its associated verges (Scotland's Noise Map).

Baseline noise levels are likely to be primarily influenced by traffic travelling along the A83 carriageway. Secondary sources are derived from vehicles travelling along the local road network and rural activities associated with land management within the area.

Population and human health

There are numerous residential and commercial properties located within 300m of the schemes. The majority are within the village of Arrochar and line the banks of Loch Long. The closest properties, lie adjacent to the A83 carriageway within the scheme extents with no roadside verge screening. Access to properties is via the A83 carriageway within the scheme extent.

Several commercial properties lie within 300m of the schemes, the closest lies adjacent to the A83 carriageway. Commercial property includes hotels, eateries, village shops, B&Bs and self-catering accommodation including Glenloin Caravan Park. All of which are accessed via the A83 carriageway within the scheme extents Access to Loch Long parking facilities including public toilets and picnic areas are located within the scheme extent.

A paved pedestrian footpath lies adjacent to the A83 carriageway throughout the scheme extent, crossing from the southbound (SB) side to the northbound (NB) side. However, for a small section of the scheme, it can be found on both sides of the A83 carriageway.

One bus stop is located on either side of the A83 carriageway within the scheme extent and one layby located on the NB side of the carriageway within the scheme extent.

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

Three walking routes as listed on WalkHighlands lie within 300m of the scheme:

- '*Arrochar to Tarbet link path*' utilises a section of the A83 carriageway within the scheme extent.
- '*LL&C Way: Arrochar to Inverglus'* is accessed via a path leading from the A83 carriageway before crossing the bridge over Loin Water within the scheme extent.
- '*Glen Loin and Coiregrograin, Arrochar*' utilises a footpath and footbridge approximately 10m south from the A83 carriageway.

Two walking routes (path references: S0496 and S0952) listed on LLTNP Core Paths utilise sections of paved pedestrian footpath which lie adjacent to the A83 carriageway within the scheme extent.

According to Scottish Road Works there are no other works scheduled within 300m of the scheme (Scottish Road Works Online).

TM will consist of night-time road closure of the A83 carriageway with amnesties.

Road drainage and the water environment

'Cowal and Lomond' (ID: 150689) is a groundwater body, in the Scotland River basin district, which underlies the scheme. It was awarded an overall status of 'good' in 2024 by Scottish Environmental Protection Agency (SEPA) under the Water Framework Directive 2000/60/EC (WFD) (Water Classification Hub).

The A83 carriageway within the scheme extent spans 'Loin Water' (ID: 10216) which is a river, in the Cowal / Clyde Sealochs Coastal catchment of the Scotland River basin district. It was awarded an overall status of 'moderate' in 2024 by SEPA (Water Classification Hub).

'Loch Long (North)' (ID: 200051) is a coastal water body in the Scotland River basin district. At its closest point lies approximately 40m west from the scheme. It was awarded an overall status of 'good' in 2024 by SEPA (Water Classification Hub).

A number of unnamed and unclassified surface waterbodies and/or culverted drainage channels lie within 300m of the scheme.

The scheme falls within an area that has no likelihood of river water flooding each year. However, the A83 carriageway within the scheme does fall within a low likelihood (0.1% chance) of coastal flooding each year and a medium likelihood (0.5% chance) of surface water and small watercourse flooding each year (SEPA Flood Maps).

Climate

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

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

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

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

Policies and plans

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

Description of main environmental impacts and proposed mitigation

Air quality

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

- 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 been 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.
- Materials will be removed from site as soon as is practicable.
- 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

Listed Buildings are suitably set-back from the scheme extents and adverse impact on HERs and NRHEs are not expected. However, the works will involve some minor excavation within the A83 verges for drainage works which may uncover unrecorded cultural heritage features within the area. As standard, the following good practice measures will be in place to reduce the risk of impacts to existing and undiscovered features of cultural heritage interest:

- There will be no storage of vehicles, plant, or materials against any buildings, walls or fences.
- Should any unexpected archaeological evidence be discovered, works will stop temporarily in the vicinity and the BEAR Scotland Environment Team contacted for advice.
- Historic Environment Scotland will be consulted with as required, in the event of any discovery/exposure of suspected archaeological features.
- People, plant, and materials will, as much as is reasonably practicable, only be present on areas of made / engineered ground. Access required out with these areas will be reduced as much as is reasonably practicable and will utilise as few access points/tracks as possible.

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 the 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 its drainage system and as such the works will not have an impact on 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, people, ancillary plant, vehicles, NRMM and materials are restricted to areas of made/engineered ground on the A83, and construction works are programmed to be of short duration, undertaken at night (19:00 – 06:00) on a rolling programme. As such, the visual impact of the works will be minimal.

Upon completion of the works, no residual impacts are anticipated e.g., when complete the visual appearance will remain largely unaffected, with a renewed road surface and drainage being the only discernible changes.

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

As mentioned, a HRA Proforma has been completed to assess the potential of Likely Significant Effects (LSE) on the qualifying features of Loch Lomond Woods SAC. The HRA Proforma concluded that there was no potential for the proposed works to result in LSE on the qualifying features of the Loch Lomond Woods SAC based on the following factors:

- No works will take place within the boundary of the SAC and no in-water works in natural watercourses are required; as such, no direct impacts (e.g., habitat loss) will occur.
- Given the minor and localised nature of the works, the lack of requirement for in-water works, and adherence to good practice measures for pollution prevention, no risk of significant pollution impacts was identified.

- Although the works will result in a temporary (localised) increase in noise, this is unlikely to significantly affect the mobile qualifying feature of the SAC as protected species in the vicinity of the works are likely to be habituated to noise and vehicle movements of the A83.
- Ample alternative habitat is available in the wider area away from the works.
- Although night works will require some artificial lighting, lighting will be directed in a way to avoid light spillage within the surrounding environment.

The habitat surrounding the works indicates the potential for presence of protected mammal 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 A83 carriageway and the number of construction vehicles and construction operatives required onsite is low given the scale and scope of works. In addition, any species in the area are likely to be accustomed to noise and visual disturbance pertaining to vehicle movements on the A83 and the scheme is of short duration. The potential for significant species disturbance within the area of likely construction disturbance is therefore considered to be low.

A search of AMPS identified a record of rosebay willowherb within the northbound verge of the scheme. However, considering the identification of such species, it is assumed that the plants are treated as per BEAR Scotland Landscape Management and relevant toolbox talks will be undertaken. There is no requirement for the import of soil, and all excavated material will be reused within the scheme extents. As such, the spread of invasive plant species is not anticipated.

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. Any protected species in the area are likely to be accustomed to road noise on the A83, and the scheme is of relatively short duration and undertaken on a rolling programme. 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.

Taking into account the nature and scale of the works and the good site practice mitigation measures which will be adopted during the works, it is anticipated that any biodiversity effects associated with the proposed works will not be significant. This receptor is not considered further in this RoD.

Geology and soils

The scheme is not located within a GCRS or geological SSSI. Although the works will entail minor excavation, this will be on engineered ground along the A83. In addition, any excavations will be carried out with good practice measures detailed in the SEMP as follows:

- Excavated material will be reused and/or redistributed within the scheme extents.
- Upon completion of the works, any damage to the local landscape will be reinstated as much as is practicable.
- Mitigation measures to prevent contamination of soils through loss of containment will be strictly adhered to.
- The parking of machinery/vehicles and storage of equipment on grass will be minimised as far as is reasonably practicable.

- Additional pollution prevention measures as outlined in the 'Road drainage and the water environment' section will be adhered to during construction.

With the above mitigation measures in place, it is anticipated that any geology and soil 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 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 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).
- The 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 25 nights on a rolling programme, with the aim being to complete the noisiest work by 23:00. Works with the potential to induce worst-case scenario noise and vibration will also be intermittent, temporary, transient and short-lived.

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) from Argyll & Bute 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.
- 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. Although the works require full closure of the A83 regular amnesties will be in place. In addition, the road closure will take place at night times when traffic count is at its lowest and no significant congestion issues are noted during the proposed construction hours. 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 scheme, will be maintained and the works are being undertaken at night when footfall and cyclist count is at its lowest.

Several residential and commercial properties are found within 300m of the scheme. The nearest residential property lies adjacent to the A83 carriageway with no

acoustic or visual 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.
- Given the proximity of residential properties to the scheme extents, the Toolbox Talk TTN-042 'Being a Good Neighbour' will be briefed prior to the works commencing.
- 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.
- 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 in natural watercourses 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 Environmental Authorisations (Scotland) Amendment Regulations 2025 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 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 will be removed, double bagged and taken off site as special waste.
- Generators and static plant may have the potential to leak fuel and/or other hydrocarbons and will have bunding with a capacity of 110%. If these are not

bunded then drip trays shall also be supplied beneath the equipment with a capacity of 110%.

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 in place:

- BEAR Scotland will adhere to their Carbon Management Policy.
- All mitigation measures detailed within 'Air Quality' and 'Material Assets and Waste' will be adhered to.
- The works will utilise the use of Warm Mix Asphalt (WMA) for binder layer in favour of Hot Mix Asphalt (HMA).
- Where possible, materials will be sourced locally to reduce greenhouse gas emissions associated with materials movement, and waste will be disposed at local landfill, 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

A section of the A83 carriageway has a low likelihood (0.1% chance) of coastal flooding and a medium likelihood (0.5% chance) of surface water 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 change to the likelihood of flooding on the A83 within the scheme extents upon completion of the works.

Works are restricted to areas of engineered ground of the A83 trunk road and traffic management will be designed in line with existing guidance. TM will consist of night-time road closure with regular amnesties. The road closure and amnesties will be publicised in advance. 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 Argyll & Bute Council Planning Portal (Argyll & Bute Council Planning Portal) identified no approved planning application within 300m of the scheme.

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. 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 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.

The HRA completed to assess potential impacts of the works has concluded that there will be no LSE on the qualifying features of the Loch Lomond Woods SAC as a result of the 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 within 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 and drainage works, with all works restricted to the A83 carriageway boundary.
- Construction activities are restricted to 931m and 752m long sections along the A83 trunk road, with a working area of 0.55ha and 0.45ha respectively.
- The works will be temporary, transient, localised, and will be completed over a rolling programme over 25 nights during night-time hours.

- Works are not expected to result in significant disturbance to nearby receptors or protected species that may be present in the wider area.
- The risk of major accidents or disasters is considered to be low.
- Measures will be in place to ensure appropriate removal and disposal of waste.
- By removing the carriageway defects this will provide this part of the A83 carriageway 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:

- The scheme will be located within the existing A83 road boundary and as such, no land take will be required.
- The scheme is located within the Loch Lomond and the Trossachs National Park, no change to the qualifying features of the park is expected due to the nature of the works.
- The Loch Lomond Woods SAC is located approximately 460m northeast from the scheme. HRA confirmed no LSE on designated features of the SAC.
- A number of residential and commercial properties lie within 300m of the scheme with closest of these having no screening. The works will have mitigation in place to minimise impacts on the nearby receptors.
- The site compound will be located on made ground.
- There are no Cultural Heritage features of licensable nature located within, or connected to, the scheme extents. It is considered likely that construction of the A83 trunk road would have removed any archaeological remains that may previously have been present.

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.
- 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 receptor located in proximity to the scheme.
- The SEMP will include plans to address environmental incidents.
- Mitigation measures detailed above and in the SEMP will be 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 on-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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Published by Transport Scotland, January 2026

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