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# **Record of Determination**

## **M74 Burnhead Road to Junction 8 South Bound**

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## Project Details

### Description

The southbound (SB) M74 carriageway at this location is currently featuring surface fretting and crazing/cracking. There are also numerous potholes, mainly in the hard shoulder (which is in poor overall visual condition), and there are many historical construction joints throughout the scheme, some of which have opened up. Much of the scheme has no recorded maintenance since 1994, and therefore may be approaching/past the end of its service life.

As such, works are required to address the surface course issues present within this stretch of carriageway. Treatment will include replacement of the surface course and deeper inlays where cracking is identified as deeper than surface course. The hard shoulder will be included in any treatment proposals.

Works will involve structural inlay treatment of the surface course using TS2010, with exact treatment depths yet to be determined. Works will involve the following construction activities:

- Milling of existing bituminous material by road planer;
- Additional bituminous material removed by jack hammer where not accessible by planer;
- Road sweeper to collect any loose material;
- HGV for removal and replacement of material;
- Tack/bond coat laid;
- New bituminous material laid by a paver;
- Material compacted using a heavy roller; and,
- Road markings will be applied where necessary.

The package of works is set to take place over the duration of a full weekend in July 2021. Night work will be included.

South Lanarkshire Council's Environmental Health Team were contacted on the 11<sup>th</sup> of June 2021 regarding the required works.

Traffic management (TM) for the works will be undertaken via contraflow, allowing the carriageway to remain open throughout the works.

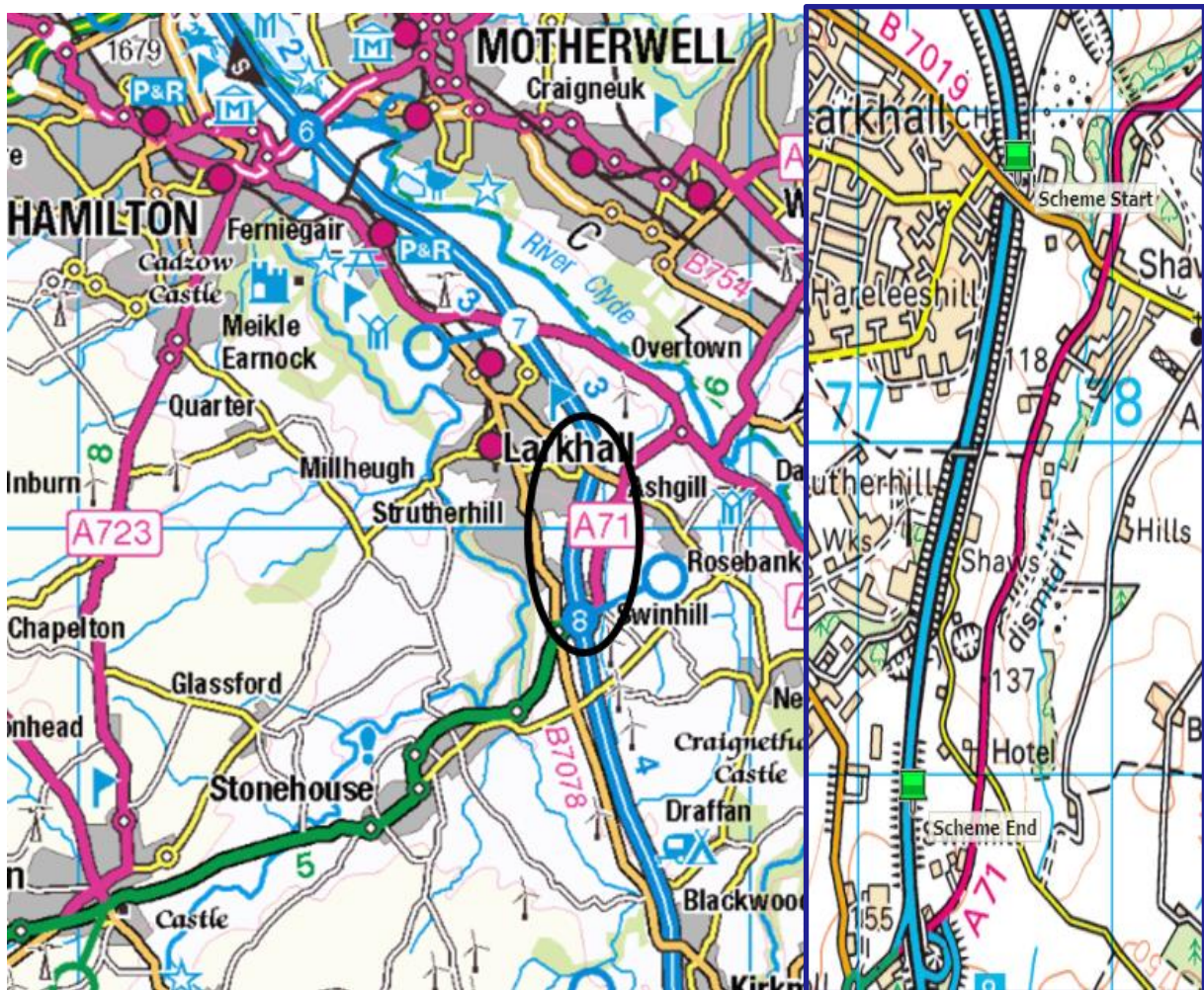
### Location

The scheme is located on a section of the M74 carriageway, east of Larkhall, within South Lanarkshire. The works have the following approximate National Grid References (NGR):

- Scheme Start: NS 77627 50759
- Scheme End: NS 77212 48863

The length of the scheme is approximately 1.95km, with an area of approximately 2ha.

Figure 1 Scheme Location and Extents



## Description of Local Environment

This stretch of the M74 carriageway falls within a semi-rural setting, with the residential area of Larkhall and Strutherhill Industrial Estate located west of the carriageway. The M74 southbound trunk road footprint within the scheme extents consists of two lanes and a hard shoulder. Road verges are vegetated with low lying grass and thin strips of trees.

## Population and Human Health

The works area is located along a semi-rural stretch of the M74 carriageway, falling within South Lanarkshire, east of the residential area of Larkhall. Strutherhill Industrial Estate is located west of the southern scheme extent.

The M74 carriageway is the main connecting route between Glasgow and Gretna. The vehicle count per day in 2019 at this location was 11,673; with a heavy goods vehicle (HGV) average of 26.7%. Baseline noise level is likely to be primarily

influenced by vehicle traffic from the carriageway, with secondary sources including activity from nearby agricultural practices and residential activities.

Several residential properties exist in proximity of the carriageway, with the closest located on Laurel Drive approx. 35m west, at the northern scheme extents.

Due to the motorway status, no non-motorised provisions exist on the M74 carriageway within the scheme extents. Three [Core Paths](#) exist in proximity; two crossing above the M74 carriageway via overbridges and one travelling adjacent to the M74 carriageway, along Shaws Road, at approx. 20m east.

The scheme falls within Candidate Noise Management Area (CNMA) 1 (M74, Area 8) as defined by the [Transportation Noise Action Plan](#), Road Maps.

## Biodiversity

The scheme is located along a semi-rural stretch of the M74 carriageway, with agricultural land to the east, and residential area of Larkhall to the west.

A desktop study using [NatureScot Sitelink Online Interactive Map](#) has highlighted Clyde Valley Woods, Special Area of Conservation (SAC), located approx. 380m west of the M74 carriageway at the southern scheme extents. This site has been designated for 'mixed woodland on base-rich soils associated with rocky slopes'.

The Amey Invasive Non-native Species Database (INNS) has not highlighted any INNS growth within proximity of the scheme extents.

## Field Survey

Surrounding environment consists of predominantly open, low-lying agricultural land, with thin vegetated strips located intermittently along the carriageway. Due to lack of favourable environment within close proximity to the scheme, presence of protected species shelter has been ruled out. As such, a desktop assessment has been deemed sufficient, and a site survey has been ruled out.

## Land

The M74 southbound trunk road footprint within the scheme extents consists of two lanes and a hard shoulder.

Road verges are vegetated with low lying grass and thin strips of trees.

On site work activities will be confined within the M74 carriageway boundary and will not require access over any private or community land.

Historic Environment Scotland's HLAMap has highlighted the following surrounding landscapes:

- Motorways and Major Roads;
- Rectilinear Fields and Farms;
- Quarry;
- Industrial or Commercial Area;



- Golf Course; and,
- Urban Area.

The works will be kept to the existing M74 carriageway boundary and will not require access to private or community land.

It has been determined that the proposed project will not have direct or indirect significant effects to land.

## Soil

The National Soil Map of Scotland has identified the local soil type for the southern scheme extent as non-calcareous gleys, however no record exists of local soil type for the majority of the scheme extents.

The scheme is not located within, or within proximity to, any Local Geodiversity Sites (formerly known as RIGS) or geologically designated SSSIs.

The Geology for this section of the M74 comprises the following:

- Bedrock geology: Scottish Middle Coal Measures Formation - Sedimentary Rock Cycles, Coal Measure Type. Sedimentary Bedrock formed approximately 315 to 318 million years ago in the Carboniferous Period. Local environment previously dominated by swamps, estuaries and deltas.

Superficial deposits: Till, Devensian - Diamicton. Superficial deposits formed up to 2 million years ago in the Quaternary Period. Local environment previously dominated by ice age conditions (U).

The works will be kept to the existing carriageway and soils shall not be impacted.

It has been determined that the proposed project will not have direct or indirect significant effects to soil.

## Water

The online Water Classification Map by Scottish Environment Protection Agency (SEPA) has highlighted Avon Water, which flows approx. 450m west of the M74 carriageway. This watercourse has been classified by SEPA as having an overall status of Moderate, with an ecology status of Moderate.

[The Indicative River & Coastal Flood Map](#) by SEPA highlighted small areas of the M74 carriageway within the scheme extents as being at risk of surface water flooding.

Road drainage is provided by a combination of top entry gullies and filter drain.

## Air

The scheme is located along a semi-rural stretch of the M74 carriageway, with agricultural land to the east, and residential area of Larkhall to the west.

The M74 is the main route connecting Glasgow and Gretna. The vehicle count per day in 2019 at this location in 2019 was 11,673; approximately 26.7% of which consisted of Heavy Goods Vehicles (HGVs).

As such, air quality is predominantly affected by the daily use of the carriageway by road vehicle users.

The scheme does not fall within any [Air Quality Management Areas](#) (AQMA) declared by South Lanarkshire Council.

## Climate Change

The Climate Change (Scotland) Act sets out the target and vision set by the Scottish Government for tackling and responding to climate change. The Act includes a target of reducing CO2 emissions by 80% before 2050 (from the baseline year 1990).

Amey, working on behalf of Transport Scotland, undertake carbon monitoring. Emissions from our activities are recorded using Transport Scotland's Carbon Management System.

To support the journey towards carbon neutral and zero waste, Amey include potential opportunities for enhancement utilising circular economy principals within assessment of material assets.

## Material Assets

Activity	Material Required	Origin/ Content
Site Construction	Road surfacing (aggregate and binder) TS2010 Surface Course Road paint Road studs	A proportion of reclaimed asphalt pavement (RAP) is used in asphalt production. Typical RAP values for base and binder are 10% -15%.  The use of TS2010 surface course results in a reduced use of imported aggregates, and an increased use of a wider range of sustainable aggregate sources.

## Waste

Key Waste Arising from Activities		
Activity	Waste Arising	Disposal/ Regulation
Site Construction	Road planings	Road planings generated as a result of the works may be recovered in accordance with the criteria stipulated within SEPA document 'Guidance on the Production of Fully Recoverable Asphalt Road Planings'.



## Cultural Heritage

[PastMap](#) has not highlighted any features of cultural heritage within proximity of the works.

## Vulnerability of the Project to Risks

The works will take place on the existing man-made carriageway structure. Works will involve like-for-like resurfacing, with no major changes to the structure.

Currently, the M74 at this location is not vulnerable to any major specific risk. SEPA's Flood Maps has identified small areas of surface water flood risk.

## Description of Main Environmental Impacts and Proposed Mitigation

### Population and Human Health

#### Impacts

- Due to their location off the carriageway, no impact is predicted to the nearby Core Paths.
- Residential properties within proximity may experience a level of disturbance during the works, including potential for sleep disruption in the event of night-time working.
- Works may result in a slight temporary increase in noise level within the CNMA.
- This section of carriageway will benefit from reduced reoccurring routine maintenance and associated levels of disruption due to TS2010 durability.
- TS2010 road surfacing will be utilised, which should improve the skid resistance and reduce mid to high frequencies of traffic levels.

#### Mitigation

- South Lanarkshire Council's Environmental Health Team were contacted on the 11<sup>th</sup> of June 2021 regarding the required works.
- Residential properties in proximity shall be notified in advance of the works, providing details of timings, nature, and duration of the works.
- Effects from noise shall be kept to a minimum through the use of appropriate mufflers and silencers fitted to machinery. All exhaust silencers will be checked at regular intervals to ensure efficiency.
- The noisiest works will be scheduled for before 11:00pm where feasible.

The residual impact to population and human health is considered slight beneficial.

It has been determined that the proposed project will not have direct or indirect significant effects to local population and human health.

## Biodiversity

### Impacts

- Protected species may be active within the local surrounding environment.
- Works are programmed to take place in July, within bat active season (May-October inclusive);
- No permanent carriageway lighting exists for this section of the M74 carriageway. As such, additional lighting for the works may impact nearby nocturnal species.
- As works will be restricted to the carriageway, no impact is predicted to the nearby designated site.

### Mitigation

- On site light sources shall be kept to a minimum, and only used as required. Any artificial light will be directed at the area of works as far as reasonably practicable, reducing any light spill into the wider surroundings, and potentially sensitive habitat (e.g. woodland).
- If a protected species is seen on or near the scheme, all works will be stopped until the animal passes by. The area will be isolated temporarily until the animal has moved on;
- The E&S team shall be contacted for any guidance if required, and the control room will be contacted for environmental record.
- Protected Species Environmental Briefing will be briefed to site operatives prior to commencement of works.

On the condition that best practice is adhered to, residual impact to local biodiversity is considered neutral as a result of the works.

It has been determined that the proposed project will not have direct or indirect significant effects to biodiversity.

## Water

### Impacts

- Potential for fuel/chemical spillages through the operation of resurfacing and use of various machinery and vehicles, which may affect the water environment if not effectively controlled.
- If not appropriately controlled, debris and run off from the works has the potential to enter nearby drains and watercourses and could detrimentally impact water quality.

## Mitigation

- Appropriate measures shall be implemented onsite to prevent any potential pollution to the natural water environment (e.g. debris, dust and hazardous substances). This will include, but will not be limited to, utilisation of drain covers, spill kits being present onsite at all times, and the use of funnels and drip trays when transferring fuel.
- Visual pollution inspections of the working area will be conducted in frequency, especially during heavy rainfall and wind.
- Debris and dust generated as a result of the works shall be prevented from entering nearby watercourses and the road drainage system, via the use of drain covers or similar.
- All debris which has the potential to be suspended in surface water and wash into the local water environment shall be cleaned from the site following the works.

Providing all works operate in accordance with current best practice, the residual impact on the local water environment is considered to be neutral.

It has been determined that the proposed project will not have direct or indirect significant effects to the water environment.

## Air

### Impacts

- The use of vehicles, plants and generators emitting carbon emissions may temporarily affect air quality and will require the use of finite resources.
- On site construction activities carry a potential to produce airborne particulate matter that may have a slight impact on local air quality levels.
- Diversion route, if required, is likely to increase traffic levels and associated emissions within local road networks.

### Mitigation

No site-specific mitigation has been identified as being required to mitigate air quality. All works shall operate in accordance with current best practice as outlined in the Guidance on the assessment of dust from demolition and construction (2014) published by the IAQM, which includes the following mitigation relevant to this scheme:

- When not in use plant and vehicle will be switched off; there will be no idling vehicles.
- All plant and fuel-requiring equipment utilised during construction shall be well maintained in order to minimise emissions, as per manufacturing and legal requirements.

- Green driving techniques will be adopted, and effective route preparation and planning shall be undertaken prior to works.
- Planing operations will be wetted to reduce dust arising.
- Drop heights to haulage vehicles and onto conveyors will be minimised.
- Lorries will be sheeted when carrying dry materials.
- Surfaces will be swept where loose material remains following planing.

Providing all works operate in accordance with current best practice, the residual impact for local air quality is considered neutral.

It has been determined that the proposed project will not have direct or indirect significant effects to local air quality.

## Climate Change

### Impacts

- Greenhouse gas emissions will be emitted through the use of machinery, material production, materials used (containing recycled and virgin materials), and transporting to and from site.

### Mitigation

- Where possible local suppliers will be used as far as practicable to reduce travel time and greenhouse gas emitted as part of the works.
- Vehicles / plant shall not be left on when not in use to minimise and prevent unnecessary emissions being emitted.
- Further actions and considerations for this scheme are detailed in section 8 Material Assets and Waste.

It has been determined that the proposed project will not have direct or indirect significant effects to climate.

## Material Assets

### Impacts

- Contribution to resource depletion through use of virgin materials,
- Greenhouse gas emissions generated by material production and transporting to and from site,
- The design life for the TS2010 surfacing proposed is estimated to be 20 years. This will reduce the requirement for maintenance to this section of road over the period.

## Mitigation

- Materials will be derived from recycled, secondary or re-used origin as far as practicable within the design specifications to reduce natural resource depletion.

It has been determined that the proposed scheme will not have direct or indirect significant effects to the consumption of material assets.

## Waste

### Impacts

- No special waste has been identified and as result all waste created from the works can be recycled, reducing the need for landfill.

### Mitigation

- Road planings generated will be recovered by a licenced contractor for reuse and / or recycling in accordance with the criteria stipulated within SEPA document 'Guidance on the Production of Fully Recoverable Asphalt Road Planings'.
- The chosen material TS2010 Surface Course allows a wider array of aggregate sources to be considered when compared to typical stone mastic asphalt (SMA). As a result, the use of TS2010 should reduce the usage of imported aggregates and increase the use of a wider range of sustainable aggregate sources.
- Operatives will be briefed with the Basic Waste Rules briefing.

It has been determined that the proposed scheme will not have direct or indirect significant effects to waste disposal.

## Vulnerability of the Project to Risks

As the works will be limited to the like-for-like replacement of the carriageway pavement and associated road furniture, there is no change to the vulnerability of the road to the risk or severity of major accidents/disasters that would impacts on the environment.

It has been determined that the proposed project is not expected to alter the vulnerability of the existing trunk road infrastructure to risk of major accidents or disasters.

## Assessments of the Environmental Effects

The following statutory organisations have been consulted:

- South Lanarkshire Council's Environmental Health Team were contacted on the 11<sup>th</sup> June 2021 regarding the required works.

A design Initial Environmental Review of the scheme, undertaken by the Environmental and Sustainability Team at Amey.

## 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)—exceed 1 hectare in area, however are not situated in whole or in part in 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:

- Construction activities are restricted to the 20,000m<sup>2</sup> (2ha) area of existing carriageway.
- Materials will be derived from recycled, secondary or re-used origin as far as practicable within the design specifications.
- The chosen material TS2010 Surface Course allows a wider array of aggregate sources to be considered when compared to typical stone mastic asphalt (SMA).
- Road planings will be fully recycled in accordance with Guidance on the Production for Fully Recovered Asphalt Road Planings.
- The design option (replacing the defective surfacing) conveys sustainability benefits by significantly reducing the quantity of maintenance interventions required at the location over approximately 20 years.

Location of the scheme:

- The scheme will be confined within the existing carriageway boundaries and as a result will not require any land take and will not alter any local land uses.
- The scheme is not situated in whole or in part in a “sensitive areas” as listed under regulation 2 (1) of the Environmental Impact Assessment (Scotland) Regulations 1999 (as amended).



Characteristics of potential impacts of the scheme:

- As the works will be limited to the like-for-like replacement of the carriageway pavement, 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.
- No significant residual impacts are predicted. Disruption due to construction activities are not expected to be significant and will be mitigated as far as is reasonably practicable.
- The successful completion of the scheme will afford benefits to road users, due to improved condition and ride quality of the carriageway surface.
- The use of TS2010 road surfacing affords the benefits of a reduction in mid to high frequencies of traffic noise and a reduction in ground vibrations. As a result, ambient noise levels should decrease post construction.

## 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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