

EC DIRECTIVE 2011/92/EU (as amended)

ROADS (SCOTLAND) ACT 1984 (Environmental Impact Assessment)

Regulations 2017 (as amended)

RECORD OF DETERMINATION

Name of Project:

A77 Spittalhill to Layby Northbound

Location:

The scheme is situated on a rural section of the A77 carriageway on the edge of Shortlees, Kilmarnock, East Ayrshire.

- Scheme start – NS 41492 33947
- Scheme end - NS 42836 34526

The scheme length is approx. 1.5km with a total area of approx. 13,500m².

Description of Project:

The works are required to maintain the safety and integrity of the A77 carriageway. A visual survey was carried out and a high of number of CAT defects were found which indicates an ageing surface. Most of the scheme length is displaying fretting and in several areas is in poor condition.

Works will involve carriageway surface reconstruction utilising TS2010 treatment, binder/base treatment will be used at deeper depths where required.

Construction Activities are likely to include:

- 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;
- Road markings and studs will be applied where necessary.

Record of Determination A77 Spittalhill to Layby NB

- Jetting/removal of obstruction to the existing drainage system
- Excavation of verge using a mini digger to install new filter drain.

The works are programmed to take place in April 2021.

Traffic Management (TM) for this scheme will involve the weekend closure of the carriageway facilitated with a diversion via A7038.

Please see Appendix 1 for a Location Plan and Scheme Extents drawing.

Description of Local Environment:

The following baseline descriptions have been numbered to follow the appropriate DMRB chapters for environmental assessment and do not reflect a ranking of sensitivity.

1. Population and Human Health

The scheme is located on a rural stretch of the A77. The scheme end sits on the southern edge of Shortlees, Kilmarnock. The ambient noise levels in this area are likely influenced by traffic on the A77, as well as local agricultural activities. There are a number of residential properties within proximity to the scheme end.

There are no footpaths, CorePaths, Bridleways or cyclepaths within the scheme extents.

One layby exists within the scheme extents.

The scheme does not fall within a Candidate Noise Management Area (CNMA) as defined by the Transportation Noise Action Plan, Road Maps.

Baseline noise at the works location is likely to be primarily influenced by vehicle traffic from the carriageway and local agricultural activities.

2. Biodiversity

The scheme is surrounded by low lying agricultural land with an area of woodland to the north. A strip of trees and shrubs flanks the carriageway, and some residential properties are located within 100m of the scheme end.

A desktop study using SiteLink has not identified any designated sites in close proximity to the scheme extents.

The Amey Animal Roadkill Database (2000 – 2020) does not highlight any records of roadkill within the scheme extents.

Amey's Invasive Non-native Species (INNS) Database has not identified any records of INNS within the scheme extents.

A field survey was carried out 27/01/2020 by the E&S Team, for the potential presence of protected species. The woodland area directly adjacent to the northbound carriageway was surveyed. Surrounding habitat seemed optimal, however the area was heavily influenced by human interference. No field signs were identified during the survey.

Description of Local Environment:	
3.	<p>Land</p> <p>The trunk road footprint consists of two northbound and two southbound lanes (works only occurring on Northbound). Road verges are vegetated with low lying grass and thin intermittent strips of scrub/trees. A mixture of agricultural fields and residential properties are present beyond the A77.</p>
4.	<p>Soil</p> <p>Scotland Soils Map¹ has identified the soil in the area as Noncalcareous gleys. British Geological Survey Maps² has identified the Bedrock geology of the area as Scottish Middle Coal Measures Formation. Superficial Deposits consist of Till, Devensian. The scheme is not located within, or within proximity to, any Local Geodiversity Sites (formerly known as RIGS) or geologically designated Sites of Specific Scientific Interest.</p>
5.	<p>Water</p> <p>An unclassified issue flows approx. 50m north of the scheme in the woodland. SEPA Flood Map³ has highlighted that parts of the carriageway within the scheme extents are at risk of surface water flooding. Road drainage consists of a positive system using top entry gullies.</p>
6.	<p>Air</p> <p>The A77 is a main route connecting Kilmarnock and Stranraer. Rural land encompasses the scheme location. Average traffic count sits at 8,629 NB vehicles a day with 14.6% being HGV. Local air quality is likely to be impacted by road traffic and rural land use activities. No Air Quality Management Areas have been declared by East Ayrshire Council.</p>
7.	<p>Climate</p> <p>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.</p>

¹ http://map.environment.gov.scot/Soil_maps/?layer=1 (Accessed 19/01/2021)

² <http://mapapps.bgs.ac.uk/geologyofbritain/home.html> (Accessed 19/01/2021)

³ <https://map.sepa.org.uk/floodmap/map.htm> (Accessed 20/01/2021)

Description of Local Environment:

8. Material Assets

Key Materials Required for Activities

Activity	Material Required	Origin/ Content
Site construction	<ul style="list-style-type: none"> • Road paint • Road surfacing • Binder • Filter stone material 	TS2010 Surface Course allows a wider array of aggregate sources to be considered when compared to typical SMA. As a result the use of TS2010 will reduce the usage of imported aggregates, and increase the use of a wider range of sustainable aggregate sources ⁴ .

Key Waste Arising from Activities

Activity	Waste Arising	Disposal/ Regulation
Site construction	<ul style="list-style-type: none"> • Road planings • Road paint/studs • Filter material 	<p>Uncontaminated road planings generated as a result of the required works, will be fully recycled in accordance with the criteria stipulated within SEPA document 'Guidance on the Production of Fully Recoverable Asphalt Road Planings'.⁵</p> <p>Further on-site investigations of the carriageway condition are required, including Coring and Testing. Due to this, condition of surfacing could not be fully determined, including presence of coal tar. As such, presence of tar is not currently known for this scheme.</p> <p>Presence of tar should be confirmed prior to the commencement of the works.</p> <p>If testing does not identify any coal tar within the scheme extents, road planings generated as a result of the works may be</p>

⁴ Transport Scotland TS2010 Surface Course Specification and Guidance Issue 04, 2018 (as amended)

⁵ SEPA Guidance on the Production of Fully Recovered Asphalt Road Planings, No date.

Description of Local Environment:		
		<p>recovered in accordance with the criteria stipulated within SEPA document 'Guidance on the Production of Fully Recoverable Asphalt Road Planings'.</p> <p>If evidence of tar is identified during further site investigations, any tar-contaminated planings will require removal off site for treatment/disposal at a licenced waste facility.</p> <ul style="list-style-type: none"> • A SEPA consignment note is required. • SEPA are to be informed at least three days prior to the movement of special waste. <p>All materials that can be should be reused throughout the network.</p>
<p>9. Cultural Heritage</p> <p>PastMap⁶ has not identified any areas of cultural significance in proximity to the scheme.</p>		
<p>10. Landscape</p> <p>The works are located on the edge of Shortlees with the surrounding environment consisting of areas of agriculture, residential properties and woodland. The A77 within the scheme extents does not fall within any designation for landscape quality or character.</p> <p>Views of, and from, the road will be temporarily affected during construction due to the presence of works, traffic management and plant. As the works are operating on a like-for-like basis, no permanent changes to landscape features are predicted.</p>		

⁶ <https://pastmap.org.uk/map> (Accessed 15/01/21)

Description of the main environmental impacts of the project and proposed mitigation:

The following environmental impacts have been numbered to follow the appropriate DMRB chapters for environmental assessment and do not reflect a ranking of impact severity. Construction and operational impacts, including impact on Policies and Plans, are covered within each environmental topic heading where applicable.

1. Population and Human Health

1.1 Impacts

- Layby will be blocked by works.
- Traffic management arrangements may prolong travel time and may increase traffic levels in the surrounding road networks.
- In the event of night-time working, residential properties in proximity will experience a level of disturbance, including potential for disruption to sleep.

1.2 Mitigation

- Advance warning signs must be placed, informing commuters of the upcoming closure, to allow for better travel planning.
- Residential properties in proximity will be notified prior to commencement of the works, detailing nature, timings and duration of the expected works.
- East Ayrshire Councils Environmental health team have been notified of potential for nightworks (no response received).

It has been determined that the proposed project will not have direct or indirect significant effects to Population and Human Health.

2. Biodiversity

2.1 Impacts

- There is potential for protected species to be active in the area surrounding the scheme.

2.2 Mitigation

- Operatives must be vigilant for potential presence of protected species. If a protected species is sighted within proximity to the works location, work will be temporarily suspended, until it has moved on. Any sightings will be reported to the E&S Team.

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

3. Land

3.1 Impacts

- Areas of the grass verges will be excavated to allow the installation of the new filter drain.

3.2 Mitigation

- Only areas where new drainage is required will be excavated.

Description of the main environmental impacts of the project and proposed mitigation:	
It has been determined that the proposed project will not have direct or indirect significant effects to the land around the scheme.	
4.	Soil
4.1	Impacts
	<ul style="list-style-type: none"> • Soils and debris may mobilise and enter nearby drains, which may pollute local water.
4.2	Mitigation
	<ul style="list-style-type: none"> • Any excavated materials should be used as backfill.
It has been determined that the proposed project will not have direct or indirect significant effects to soil around the scheme.	
5.	Water
5.1	Impacts
	<ul style="list-style-type: none"> • If not adequately controlled, debris and run off from the works could be suspended in the surface water. In the event of a flooding incident, this debris may be mobilised and could enter the road drainage having a detrimental effect on the surrounding local water environment; • Potential for fuel/chemical spillages through the use of various plant and vehicles, which may adversely impact the water environmental.
5.2	Mitigation
	<ul style="list-style-type: none"> • Appropriate measures should be implemented onsite to prevent any potential pollution to the natural water environment (e.g. debris, dust and hazardous substances). This should include spill kits being present onsite at all times; • Visual pollution inspections of the working area must be conducted in frequency, especially during heavy rainfall and wind; • Debris and dust generated as a result of the works must be prevented from entering the drainage system. This can be via the use of drain covers or similar; • Weather reports should be monitored prior to and during the works with all construction activities temporarily halting in the event of adverse weather/flooding event. The works should only continue when it is deemed safe to do so and run-off/drainage can be adequately controlled to prevent pollution.
It has been determined that the proposed project will not have direct or indirect significant effects to water.	
6.	Air
6.1	Impacts
	<ul style="list-style-type: none"> • The use of vehicles and plant emitting carbon emissions may temporarily affect air quality. • On site construction activities carry a potential to produce airborne particulate matter that may have a slight impact on local air quality levels.
6.2	Mitigation

Description of the main environmental impacts of the project and proposed mitigation:

- Best practice measures will be adopted for the duration of the scheme. Best practice measures will include but not limited to:
 - Vehicle and plant servicing/checks as per manufacturing and legal requirements;
 - Adoption of drive green techniques;
 - Route preparation and planning.
 - When not in use plant and vehicle will be switched off.
- 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.

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

7. Climate

7.1 Impacts

- Greenhouse gas emissions will be emitted through the use of machinery, vehicles and materials used (containing recycled and virgin materials).

7.2 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.

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

8. Material Assets

8.1 Impacts

- Contribution to resource depletion through use of virgin materials,
- Greenhouse gas emissions generated by material production and transporting to and from site,
- Transportation and recovery of planings will require energy deriving from fossil fuel,
- Limited quantity of waste from sweeping will arise requiring disposal.

8.2 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.
- 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

Description of the main environmental impacts of the project and proposed mitigation:

TS2010 should reduce the usage of imported aggregates and increase the use of a wider range of sustainable aggregate sources.

- Road sweeping waste will be treated at a licenced facility to separate useful materials such as stone/aggregate as far as reasonably practicable, recovering this waste and diverting it from landfill.

Circular Economy

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.

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

9. Cultural Heritage

Given the restriction of the works to the existing carriageway and the distance separating works from the above highlighted feature of cultural heritage, no impact is predicted.

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

10. Landscape

Works will be like for like in nature and will not have any lasting visual change. Views of and from the road will be impacted by the presence of traffic management, plant and vehicles during construction. This is predicted to be a slight temporary impact locally, with no permanent change to views following the completion of works.

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

11. Vulnerability of the Project to Risks

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 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.

Extent of EIA work undertaken and details of consultation:

The following environmental parameters have been considered within this Record of Determination:

- Population and Human Health
- Biodiversity
- Land
- Soil
- Water
- Air

Extent of EIA work undertaken and details of consultation:

- Climate
- Material Assets
- Cultural Heritage
- Landscape

The following statutory organisations have been consulted:

- East Ayrshire Council's Environmental health team

Statement of case in support of a Determination that a formal EIA and Environmental Impact Assessment Report is not required:

The works are considered to constitute a relevant project falling within Annex II as referred to in the Environmental Impact Assessment (Scotland) Regulations 1999 (as amended), as they exceed 10,000m² in area.

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). Screening using Annex III criteria, reference to consultations undertaken and review of available information has identified there is no need for a full 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 13,500m² 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 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.
- 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.

APPENDIX 1 : SCHEME LOCATION AND EXTENTS

