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Record of Determination

A76 Bowhouse Roundabout to Barleith

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Project Details

Description

The works are required to maintain the safety and integrity of the A76 carriageway. The main driver for the scheme is the stripping of the surface dressing, which was carried out in 2017. The old Hot Rolled Asphalt (HRA) below the surface dressing is showing signs of extensive crazing, along with transverse and longitudinal cracking.

The proposed treatment will comprise of resurfacing and reconstruction to a depth of 280mm.

The working hours on site will comprise of weekday nights and weekend shifts.

Location

The works will be carried out on the A76 south of Kilmarnock with the road immediately surrounded by mature woodland and the wider area comprised of flat arable and pastoral farmland with Her Majesties Prison Kilmarnock accessed off the Bowhouse roundabout.

Image 1 – Site Location

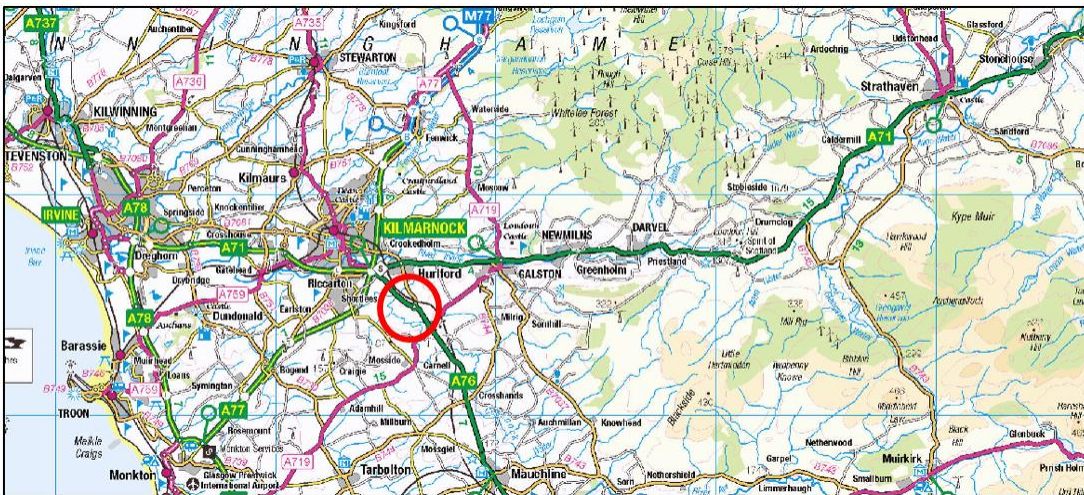
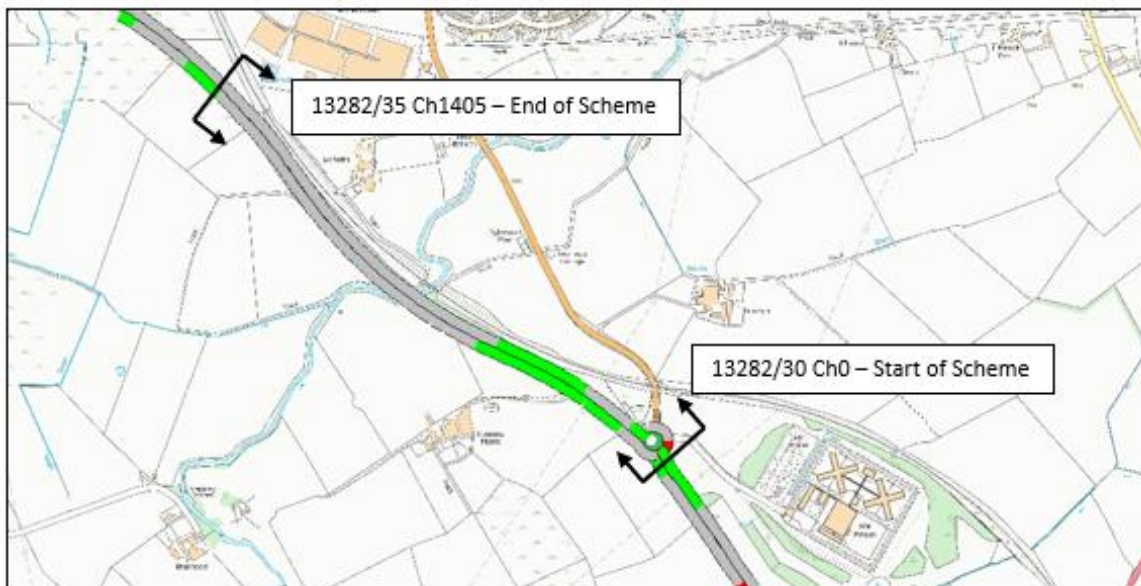


Image 2 – Scheme Extents



Description of Local Environment

Population and Human Health

The scheme is taking place within a rural setting outside Kilmarnock with no residential properties located within 100m of the scheme with the closest being approximately 190m north east at Barleith Farm.

The average annual daily traffic flow (AADF) one way in 2019 was 11,944 with 13% of these being Heavy Goods Vehicles (HGV).

There are no Core paths, Cyleways or Bridalways located within the scheme extents however a right of way exists between the A76 and Haining Mains to the west.

There are four laybys, four field accesses, one junction, and an underbridge A76 350 Hurlford Bypass 22, throughout 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.

Biodiversity

This scheme is located in a rural setting with mature woodland along its length.

A desktop study using Nature Scot's [Sitelink](#) Map highlights Muirkirk and North Lowther Uplands as a Special Protection Area (SPA) as the nearest Natura 2000 site located approximately 9km south east of the scheme.

Because of the nature of the works, the qualifying features of the SPA and distance of the works no impacts on the SPA are anticipated.

Amey's Roadkill Database (2000– 2020) does not highlight any protected species roadkill within the scheme extents.

There are no records of Invasive species within the scheme extents.

There are no Sites of Special Scientific Interest (SSSI), National Scenic Areas or National Nature Reserves within 500m of the scheme extents.

Land

The trunk road footprint consists of one northbound and one southbound lane. Road verges are vegetated with low lying grass and mature woodlands. A mixture of agricultural fields, an industrial plant and residential properties are present beyond the A76.

Soil

Scotland [Soils](#) highlights the local soils as Mineral gleys.

A desktop study using the British Geological Survey [Map](#) has identified local geology types as the following:

- Bedrock Geology: Upper Limestone Formation - Sedimentary rock cycles, Clackmannan group type. Sedimentary bedrock formed approximately 324 to 329 million years ago in the Carboniferous period. Local environment previously dominated by swamps, estuaries and deltas.
- Superficial Layer: Till, Devensian - Diamicton. Superficial deposits formed up to 2 million years ago in the Quaternary period. Local environment previously dominated by ice age conditions

The works will be kept to the existing carriageway and will not have any impact on soil or geology.

Water

Drainage is provided by a combination of filter drain, top / side entry gullies, and kerb drains.

Scottish Environment Protection Agency's (SEPA) Water Classification [Hub18](#) identifies the Cessnock Water (ID 10927) as running directly under the scheme, its overall condition is classed as Moderate.

The scheme lies within the groundwater catchment for Kilmarnock (ID 150662) this has been classified as being of Poor condition.

The works areas immediately surrounding the Cessnock Water have a high [risk](#) of flooding from both river and surface water.

Air

The A76 is the main route heading south west of Kilmarnock.

The AADF one way in 2019 was 11,944 with 13% of these being Heavy Goods Vehicles (HGV).

Local air quality is likely to be impacted by road traffic and rural land use activities as well as HMP Kilmarnock.

East Ayrshire have not declared any Air Quality Management [Areas](#).

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

Table 1 – Construction materials

Key Materials Required for Activities		
Activity	Material Required	Origin/ Content
Site Construction	TS2010 Surface (bitumen and aggregate) Road Paint/studs AC32/AC20 Binder and Base	A proportion of reclaimed asphalt pavement (RAP) is used in asphalt production. Typical RAP values for base and binder are 10% -15% with up to 10% in surface course. 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.

Waste

Table 2 – Construction waste materials

Key Waste Arising from Activities		
Activity	Waste Arising	Disposal/ Regulation
Site construction	Road planings	<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.</p> <p>A core report showed cracking in areas of the surface for the length of the core.</p> <p>Coal Tar contain high levels of Benzo (a) pyrene.</p> <p>Any waste containing coal tar will be classed as special waste. This will require landfill disposal to a site capable of accepting coal tar contaminated waste.</p> <p>The disposal of special waste is also subject to obtaining a SEPA consignment note and providing advance notice of at least three days prior to any waste movement.</p>

Cultural Heritage

[PastMap](#) has identified one Listed building within proximity, approx. 280m north east of the scheme location. This is Haining Mains, a Category C listed building (LB18513).

No impact is predicted from the works as works are restricted to the A76 carriageway and sufficiently distanced.

Description of Main Environmental Impacts and Proposed Mitigation

Population and Human Health

Impacts

- Traffic Management (TM) will have potential to cause disturbance to local property's access.
- There may be a minor disturbance to road users through increased journey times with traffic management for the roundabout being a full weekend closure starting on a Thursday night. The mainline carriageway will be overnight closures from Monday – Saturday. The diversion route will be A76 NB leave at Crossroads Roundabout and follow the A719 to the A77 then follow A77 NB to Bellfield Interchange. A76 SB is the opposite from Bellfield interchange.

Mitigation

- Properties as highlighted in the pre-notification map will be notified prior to the works detailing the nature, timings and duration of works along with traffic management arrangements.
- TS2010 road surfacing is shown to have superior durability and noise reducing features compared to standard road surfacing mixes; thus preventing the need for reoccurring routine maintenance and associated levels of disruption.
- Effects from noise will be kept to a minimum through the use of appropriate mufflers and silencers fitted to machinery.
- All exhaust silencers must be checked at regular intervals to ensure efficiency.
- Noise barriers / screening will be used where necessary to reduce the effects of noise being emitted to these residential properties.
- Switching off plant and vehicle when not in use.
- With best practice mitigation measures in place the residual impact to population and human health is considered slight adverse during construction.

Biodiversity

Due to the absence of sensitive receptors in the vicinity of the works and the time of year of the proposed works no impacts are predicted.

Land

The works will be kept to the existing A76 carriageway boundary and will not require access to private or community land. Plant, materials and any temporary storage will be kept to the made carriageway surface only.

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

Soil

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

Water

Impacts

- 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 local water quality.

Mitigation

- Operatives must be briefed with the Water Pollution Prevention toolbox talk before starting works.
- Appropriate measures will be implemented onsite to prevent any potential pollution to the natural water environment (e.g. debris, dust and hazardous substances). This will include spill kits being present onsite at all times, the use of funnels and drip trays when transferring fuel etc.
- Pollution response procedures will be adhered to if any pollution incidences occur.
- 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.
- Oils, fuels and other potential pollutants must be stored safely on site to avoid spillages.
- Weather reports will be monitored prior and during all construction activities. In the event of adverse weather / flooding events, all activities should temporarily stop, and only reconvene when deemed safe to do so, and run-off / drainage can be adequately controlled to prevent pollution.

Providing all works operate in accordance with current best practice and SEPA Guidance for Pollution Prevention (GPPs) the residual impact for water is considered to be neutral.

Air

Impacts

- Plant and vehicles required to carry out the necessary construction activities may impact local air quality through associated emissions and dust generated.
- Traffic management arrangements may increase traffic on local roads and impact local air quality.
- Increase in emissions on the local area.

Mitigation

Regular monitoring (e.g. site walkover by engineer or Clerk of Works) must take place when dust generating activities are occurring. In the event that an unacceptable volume of dust is emanating from the site the operation must, where possible, be modified and rechecked to verify that the corrective action has been effective. Actions include:

- Minimising cutting plant idling time and grinding onsite.
- Reducing the operating hours.
- Repositioning equipment.
- Changing the method of working.
- The following 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 will be followed:
- Ensure all vehicles switch off engines when stationary; there should be no idling vehicles;
- All plant and fuel-requiring equipment utilised during construction should be well maintained in order to minimise emissions.

Impact is considered slight during construction, residual impact is considered slight due to increase of emissions from stationary vehicles.

Climate Change

Impacts

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

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 Material Assets.

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

Material Assets

- 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.

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

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.

Waste

Impact

- Road plainings will be excavated as a result of the scheme.
- Limited quantity of waste from sweeping and road planings will arise requiring disposal.

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'.
- 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.

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.

Vulnerability of the Project to Risks

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

Cumulative Effects

No other TS schemes are proposed at the same time as the scheme or other proposed developments in the vicinity of the scheme will be under construction at the same time as this scheme, therefore no cumulative effects are anticipated.

Assessments of the Environmental Effects

As works will be carried out in part during night times East Ayrshire Council were notified on 16/09/2021 with no response received to date.

Provided that mitigation and best practice is followed the overall residual impact will be neutral.

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, and 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 1.1 ha 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 will 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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