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Record of Determination

A77 Whitletts Roundabout to Sandyford Toll Roundabout

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Project Details

Description

This scheme is required to improve the ride and quality of the carriageway on this section of the A77.

Works will involve carriageway surface reconstruction utilising TS2010 and include the following:

- 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 and studs will be applied where necessary.

These works are programmed to begin in October 2021, proposed dates see works starting on the 22nd October and will last until 1st November.

Traffic Management (TM) for this scheme will involve total carriageway closure which will be facilitated by an appropriate diversion.

South Ayrshire Council's Environmental Health team have been contacted (10/06/2021).

Location

The scheme is located in a semi-rural section of the A77 carriageway between Prestwick and St. Quivox, South Ayrshire. The National Grid Reference is:

- Scheme start – NS 36608 23331
- Scheme end - NS 38012 25627

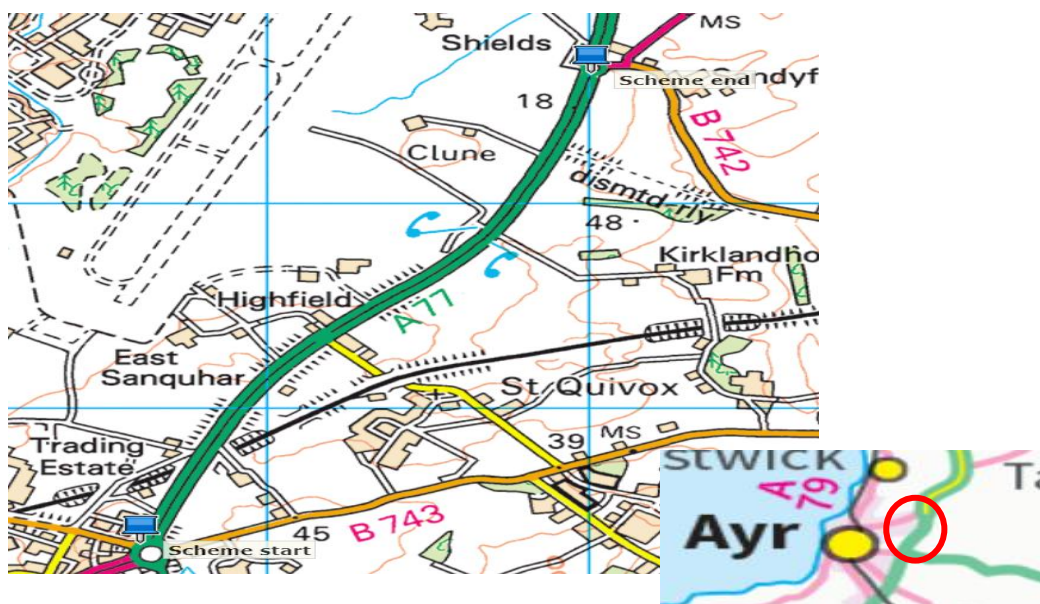


Image 1 – Scheme Location

Description of Local Environment

Population and Human Health

The majority of the scheme is flanked on both sides by farmland, this will be the primary source of ambient noise, there are some industrial properties which will feed into ambient noise.

There are a number of residential properties in close proximity to the carriageway, the closest being approximately 30m from the scheme.

A footpath and cycle path exists adjacent to the north bound carriageway.

Core Path [SA11](#) crossed the carriageway within the scheme extents and partially runs alongside the southbound carriageway.

There are a number of accesses to the local road network within the scheme extents.

The scheme does not fall within a Candidate Noise Management Area ([CNMA](#)).

Biodiversity

The scheme is flanked on both sides by farmland for the majority of the scheme length.

[SiteLink](#) has not identified any designated sites within proximity to the scheme.

The Amey Animal Roadkill Database (2000 – 2021) does not highlight any records within the scheme extents.

Amey's Invasive Non-native Species (INNS) Database has identified a number of records of Japanese Knotweed and Giant Hogweed adjacent to the carriageway where the works will take place. These are on the roadside verges and are no more than 10m from the carriageway.

The NBN [Atlas](#) identified Eurasian Red Squirrel *Sciurus vulgaris* within 2km of the scheme extents.

A field survey has not been undertaken as there is no suitable habitat for protected species shelter within the scheme extents.

Land

The scheme is situated on a semi-rural section of the A77 carriageway with vegetated verges. Agricultural fields make up the wider environment.

Soil

Works are restricted to the existing carriageway.

Water

There are no water bodies or courses within close proximity to the scheme.

Air

The scheme is situated on a section of the A77, this is a main route between Glasgow and Stranraer. The Annual Average Daily Traffic ([AADT](#)) flow in 2019 was 30,775 with 2,147 of these being Heavy Goods Vehicles.

The scheme does not fall within an Air Quality Management [Area](#).

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	<ul style="list-style-type: none"> • Road paint • TS2010 Road surfacing • Binder • Road studs 	TS2010 Surface Course allows a wider array of aggregate sources to be considered when compared to typical SMA.

Key Materials Required for Activities		
		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	<ul style="list-style-type: none"> • Road planings • Road paint/studs 	<p>Uncontaminated road planings generated as a result of the required works, will be fully recycled in accordance with the criteria stipulated within Scottish Environment Protection Agency (SEPA) document 'Guidance on the Production of Fully Recoverable Asphalt Road Planings.</p> <p>As testing has not identified any coal tar within the scheme extents, 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'.</p> <p>All materials that can be should be reused throughout the network in line with applicable legislation and guidance.</p>

Cultural Heritage

There are no features of cultural heritage that will be affected by works.

Description of Main Environmental Impacts and Proposed Mitigation

Population and Human Health

Impacts

- Noise from works may impact residential properties in close proximity, especially at night.
- Access roads will likely be blocked.
- Footpaths/cycleways may be partially blocked in sections of the works.

Design Mitigation and Regulatory Requirements

South Ayrshire Council's Environmental Health team have been contacted (10/06/2021).

Site Specific Control Measures

- Residential properties highlighted on the notification map should receive a letter drop detailing the works, if night works are to occur.
- All plant/vehicles will be fit with mufflers/silencers.
- No engines should be left idling when not in use.
- The loudest works should be carried out before 23:00 each night.
- If the works do block footpaths/cyclepaths then alternative safe access should be made available for pedestrians of all abilities.
- Local access should be granted by site operatives.

Provided that mitigation measures and best practice are followed the residual impact is deemed to be neutral.

Biodiversity

Impacts

- Potential for INNS to be spread if not properly managed.

Site Specific Control Measures

- Works should avoid areas of INNS growth where possible. Where works are required to be undertaken within or within close proximity of an area of growth, the following measures are required to prevent spread:
 - Plant/equipment and footwear washing facilities must be in place prior to starting construction works.
 - Prior to operatives leaving an area of INNS growth, a visual check of all PPE should be undertaken.

- All soil and plant fragments must be removed from PPE.
- Any wash water and soils should be contained and redistributed within areas of INNS (it must not be removed from site).
- All plant and equipment must also be thoroughly cleaned and checked to ensure it is free from any soil and plant fragments.
- As above, this material should be appropriately contained and collected for redistribution within the contaminated area.

Provided that the mitigation measures and best practice are followed the residual impact is deemed neutral.

Land

The works will be kept to the existing A77 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

As works are restricted to the existing carriageway footprint there is no impact on soil predicted.

Water

Impacts

There is a potential for debris and works materials to enter the drainage system.

Mitigation

- Fully stocked spill kits should be on site at all time.
- Appropriate measures, as detailed in the Guidance for Pollution Prevention (GPP) 1 and 5 issued by [NetRegs](#), should be implemented to prevent pollution to the natural water environment (e.g. debris, dust sand and hazardous substances) via entering nearby drains.
- Road drainage should be suitably plugged before the works commence.

Provided that mitigation measures and best practice are followed the residual impact is deemed neutral.

Air

Impacts

- On site construction activities carry a potential to produce airborne particulate matter that may have a slight temporary impact on local air quality levels.

Mitigation

- Plant should not be left to idle and all machinery should be switched off when not in use.
- Plant, machinery and vehicles should be maintained in line with manufacturer standards and guidelines.
- Dust suppression should be available on site if required.

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

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 section 8 Material Assets.

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.

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.
- 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.

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

Impacts

- Transportation and recovery of planings will require energy deriving from fossil fuel,
- Limited quantity of waste from sweeping 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

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

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.

Cumulative Effects

There are no schemes in close proximity to this one which will have a cumulative effect on the local natural environment.

Assessments of the Environmental Effects

Provided that mitigation measures and best practice are followed the impact from the scheme is deemed neutral.

South Ayrshire Council's Environmental Health team have been contacted (10/06/2021).

Statement of case in support of a Determination that a statutory EIA is not required

This is 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.

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 24,800m² 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.

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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