

Record of Determination A75 The Glen West Bound

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Project Details

Description

The works are required to maintain the safety and integrity on an approximately 2268m section of the westbound (WB) A75 carriageway, west of Dumfries. Road surfacing within the scheme extents is currently showing multiple transverse construction joints, fretting (primarily within the wheel tracks), and localised areas of potholes with small cracks.

The works will involve replacement of the surface course across the full scheme extent to address the surface defects, whilst sealing the lower layers of the pavement and therefore preventing future water intrusion of the lower layers. Filter drainage material along the full scheme extents will also be replaced in conjunction with resurfacing works.

Works will involve carriageway surface reconstruction utilising TS2010 treatment across the full scheme extents, to depths of 45mm, 100mm and 270mm.

Filter drain shall be replaced with new material across the full length of the scheme.

The proposed construction activities are likely to involve the following:

Re-surfacing:

- Milling of existing bituminous material by road planer;
- Hand-held jackhammer and compressor for breaking up surfaces not accessible by planer;
- Loader/excavator used to collect and move excess material;
- Base/binder material laid and compressed (where required);
- New bituminous material laid by a paver;
- Material compacted using a heavy roller;
- Mechanical sweeper to collect loose material;
- HGV for removal and replacement of material; and,
- Road markings replaced.

Drainage improvements:

- Excavation of existing filter stone and overgrown vegetation (using mini excavator); and,
- New filter drain material placed.

Total working area will be approximately 16,340m².

Works will require the full closure of the westbound carriageway. A suitable diversion or contraflow operations will also be put in place, however yet to be fully determined.

Works will take place over eight 24 hour shifts in December 2021.

Dumfries and Galloway Council were notified of the works on 6th of September 2021.

Location

The works are located on a semi-rural stretch of the A75 carriageway, west of Dumfries, Dumfries and Galloway, and have the following national grid references (NGR):

Scheme Start: NX 92423 75163

Scheme End: NX 90320 74821

Figure 1 - Scheme Location

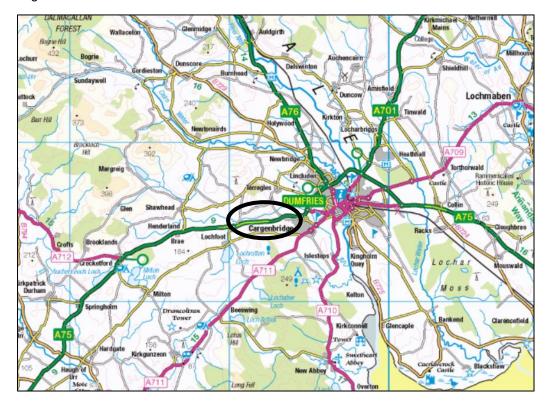
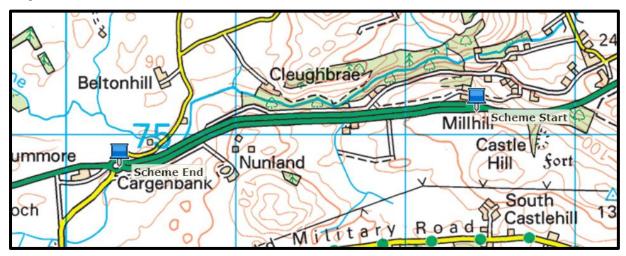


Figure 2 – Scheme Extents



Description of Local Environment

Population and Human Health

The scheme is located in a semi-rural setting within Dumfries and Galloway, surrounded primarily by farmland, with intermittent vegetated strips flanking the carriageway.

Several residential properties exist in proximity. The closest, Cargenbank, is located approximately 40m from the westbound carriageway at the western scheme extents.

Nunland Country Holiday Park is located approximately 60m south of the works.

One access is present within the scheme extents, which leads to residential property Craigallan. This property can only be accessed from the A75 within the scheme extents.

No <u>Candidate Noise Management Areas</u> are located within proximity to the works location.

A footway exists at the western scheme extents and crosses the A75 carriageway. Another footway exists adjacent to the eastbound carriageway behind a hedge, at a distance of 5m at its closest point.

There are no Core Paths or designated cycle ways within the scheme extents.

Average annual daily flow (AADF) for the A75 carriageway within the scheme extents in 2019 accounted for 8,751 vehicles per day, with an average of with 20.5% heavy goods vehicles (HGVs).

Baseline noise levels are likely primarily influenced by vehicle traffic along the A75, with secondary influence likely from nearby agricultural practices.

Biodiversity

The works are located along a semi-rural stretch of the A75 carriageway. Farmland dominates the surrounding landscape, with areas of woodland present intermittently throughout the scheme extents.

A desktop study using <u>Nature Scot Sitelink</u> did not identify any nationally designated sites within 2km of the works, or any locally designated sites within 300m.

The Amey Invasive Non-native Species (INNS) Database holds no record of INNS within the scheme extent.

The NBN Atlas (2010 – 2021) has historical records of the following protected species within 2km of the scheme:

- Red squirrel Sciurus vulgaris
- Otter Lutra lutra

Several protected mammal species surveys have been carried out by the Environmental & Sustainability team in the nearby surrounding environment, to determine the requirement for protected species licencing prior to construction, under the Habitats Regulations 1994, Wildlife and Natural Environment (Scotland) act 2011 and Protection of Badgers Act 1992.

Historical Visits:

The managed woodland found north of the Eastbound (EB) carriageway at 'The Glen' was surveyed for the presence of protected species in October 2017, and again in September 2019.

- Cargen Pow/Bogrie Lane was surveyed to identify potential otter activity and/or holts. The managed woodland and farm surveyed to identify potential badger activity and/or setts.
- No field signs or resting places for protected species were identified throughout the scheme extents during both surveys.

In February 2020, the managed woodland landscape to the eastern scheme extents on the EB carriageway was surveyed.

 The habitat was deemed favourable for badger, and some potential snuffle holes and paths were highlighted during the survey, however nothing indicative of badger was found.

Recent Site Visit:

A follow up site survey was undertaken by the E&S team on 24/11/2020;

 This field survey was undertaken by the E&S Team to determine the requirement for protected mammal species licensing, under the Wildlife and Countryside Act 1981, the Nature Conservation (Scotland) Act 2004, the Conservation (Natural Habitats, &c.) Regulations 1994, Wildlife and Natural Environment (Scotland) Act 2011 and the Protection of Badgers Act 1992.

- The woodland adjacent to the EB carriageway of the scheme extents was surveyed. This section consisted of managed woodland ('ancient', generally consisting of broad-leaved species or native pine woods, characterised by space between the trees), and was deemed optimal for badger due to extensive vegetative cover and connectivity with surrounding foraging habitat.
- Some evidence of potential badger presence was found, including snuffle holes and mammal paths, however nothing indicative of badger was identified. No badger setts were present within the surveyed area.

Land

The A75 at this section of the network is a dual carriageway in westbound direction starting with a sweeping left-hand bend and followed by negative and positive gradients. Half-way through the section consist of a second sweeping left-hand bend, which is then followed right hand-bend on the approach to Drummore roundabout. A Vechicle Restraint System at central reserve runs throughout the entire length of the scheme.

Historic Environment Scotland's <u>HLAMap</u> has highlighted the following surrounding landscapes:

- Rectilinear Fields and Farms
- Managed Woodland

The works will be kept to the existing A75 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

<u>Scotland's Environment Scotland's Soils Map</u> has identified the local soil types within the scheme extents as brown earths.

A desktop study using the <u>British Geological Survey Map</u> has identified major local geology type as the following:

Bedrock Geology:

 Carghidown Formation - Wacke. Sedimentary Bedrock formed approximately 433 to 444 million years ago in the Silurian Period. Local environment previously dominated by deep seas.

Superficial Deposits:

- Langholm Till Formation Diamicton. Superficial Deposits formed up to 2 million years ago in the Quaternary Period. Local environment previously dominated by ice age conditions (U).
- Alluvium Sand, silt and clay. Superficial Deposits formed up to 2 million years ago in the Quaternary Period. Local environment previously dominated by rivers (U).

Water

Drainage is provided via filter drain at the nearside WB verge, which runs through entire length of the scheme.

A desktop study using the Scottish Environment Protection Agency's <u>Water</u> <u>Classification Hub Interactive Map</u> has identified the following classified water bodies in proximity of the works:

- Lochfoot burn flows adjacent to and below the A75 carriageway at the western
 extent of the scheme and has been classified by SEPA as having an overall
 status of 'Moderate', and an ecological rating of 'Moderate'.
- Cargen Pow/Bogrie Lane flows adjacent to the A75 carriageway for the full extent
 of the scheme, located approximately 10m from the eastbound carriageway at its
 closest point. This watercourse has been classified by SEPA as having an overall
 status of 'Moderate', and an ecological rating of 'Moderate'.

<u>SEPA Flood Risk Map</u> has identified sections of the A75 carriageway as being at risk of surface and river water flooding within the scheme extents.

The installation of the new filter drain will replace an existing drainage system, therefore, under the Controlled Activities Regulations General Binding Rule (GBR) 6 and 9, the scheme does not require any form of registration or license.

Air

The works are located along a semi-rural stretch of the A75 carriageway west of Dumfries. Approximately six residential properties are located within 100m of the works.

Average annual daily flow (AADF) for the A75 carriageway within the scheme extents in 2019 accounted for 8,751 vehicles per day, with an average of with 20.5% heavy goods vehicles (HGVs).

No <u>Air Quality Management Areas</u> have been declared by Dumfries and Galloway 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

Table 1 – Key Materials Required for Activities

Activity	Material Required	Origin/ Content
Site Construction	 TS2010 surface course AC32 Base AC20 Binder Bitumen Road paint Road studs Filter stone 	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 – Key Waste Arising from Activities

Activity	Waste Arising	Disposal/ Regulation
l Site	Road planings Removed filter stone	No tar bound macadam was found within the tested cores.
		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.
		Removed filter drain material will be taken off site and disposed of at a licenced waste facility.

Cultural Heritage

A desktop study using <u>PastMap</u> has identified Drummore Farmhouse, Retaining Wall and Gatepiers, (a Category B Listed Building), located approximately 190m west of the works.

Given the distance and as the works will be restricted to the A75 carriageway no impact is predicted to the feature of cultural heritage.

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 A75 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

- Works will operate within close proximity to residential properties with there being a potential for sleep to be disrupted.
- Works may result in temporary obstruction of the footpath at the western scheme extent. The footway situated behind an established hedge is not likely to be impacted by the works.
- Access to residential property Craigallan may be temporarily restricted during the work.
- Traffic management (TM) for the works will involve a total closure of the carriageway with a suitable diversion route put in place.
- 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.

Mitigation

- Dumfries and Galloway Council have been notified of the works, undertaken by the E&S Team.
- Residential properties within proximity will be notified in advance of the timing, nature and duration of the works, as well as any potential access restrictions.

- Effects from noise should be kept to a minimum through the use of appropriate mufflers and silencers fitted to machinery. All exhaust silencers should be checked at regular intervals to ensure efficiency.
- The noisiest works should be scheduled for before 11:00pm if feasible.
- Advanced warning signs should be put in place to notify drivers of the upcoming closures and diversion route.
- Operatives must be briefed with the Noise and Vibration and Good Neighbour toolbox talk before starting works.
- Appropriate measures must be implemented on site to ensure the safe passage of pedestrians of all abilities by the works location.
- Access to residential properties will be maintained at all times.

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

- Surrounding area is deemed favourable for protected species. There is potential for protected species to be active within the wider local area.
- Nocturnal species may experience slight disturbance due to the addition of lighting sources during night-time works; lighting can affect commuting and foraging routes, which have been shown to be avoided if there is artificial light spill onto these areas.

Mitigation

- Site operatives should be aware about the high possibility of protected species presence in and around the works area.
- If a protected species, is seen on or near the scheme, all works should be stopped until the animal passes by. Do not approach protected species moving around close to works and isolate the area temporarily (if possible) until the animal has moved on;
 - The E&S team should be contacted for any guidance if required, and the control room should be contacted for environmental record.
- Any areas of open excavations should be ramped, to prevent accidental entrapment of protected species.

- All containers should be covered, and no hazardous materials should be stored on site.
- On site light sources should be kept to a minimum, and only used as required;
 - When in use, any artificial light should be pointed and 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).
 - When not in use, light sources should be switched off to reduce impact on nocturnal species.
- Operatives should be briefed with the protected species environmental briefing before starting works

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

Soil

Impacts

Minor soil works will be required to replace areas of filter drain. Works may result
in minor soil disturbance, which can create adverse conditions, including erosion
and polluted soils.

Mitigation

- Weather reports should be monitored prior to the works, with all construction activities temporarily halting in the event of predicted high rainfall or wind.
- Excavation of soils should be kept to a minimum and only where necessary, with any excavated soils being re-used on site as far as reasonably practicable.
- Care should be taken during filter drain material replacement to avoid mobilising excavated soils in local waterbodies.

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

Water

Impacts

- If not appropriately controlled, debris and run off from the works has the potential to enter nearby watercourses and could detrimentally impact water quality.
- In the event of a flooding incident, the works will carry an increased risk of allowing fine sediments to become mobilised in surface water.
- Potential for spills, leaks or seepage of fuels and oils associated with plant to escape and reach drainage systems and watercourses, if not controlled.

Mitigation

- 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, but not be limited to, 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 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 nearby watercourses and the road drainage system. This can be 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 should be cleaned from the site following the works.
- Weather reports should 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.

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

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

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 vehicles 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.
- 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.
- Filter stone will be removed and cleaned to allow for use in the future.
- 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.

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 16,340m² (1.6ha) 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 area" 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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