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Record of Determination A701 Springhill House

Contents

Project Details

Description

The works are required to maintain the safety and integrity on an approximately 1.7km section of the A701 carriageway, north of St. Ann's. Road surfacing within the scheme extents is currently showing multiple transverse construction joints, excessive fretting, chip loss and localised areas of cracking in wheel tracks.

The works will involve carriageway surface reconstruction utilising TS2010 treatment across the full scheme extents, to a 30mm depth. Deeper inlay treatment to a depth of 100mm, 200mm and 270mm will also be undertaken where required, utilising AC20 binder.

The proposed construction activities are likely to involve the following:

- 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;
- Road markings replaced; and,

Total working area will be approximately 12,483m².

The works will involve a full weekend closure, operating from 20:00 on the Friday to 06:00 on the Monday. Following this, three further overnight only closures will be required. The works are due to commence on the 10th of September 2021.

Dumfries and Galloway Council were notified of the upcoming works on the 12th of August 2021.

Location

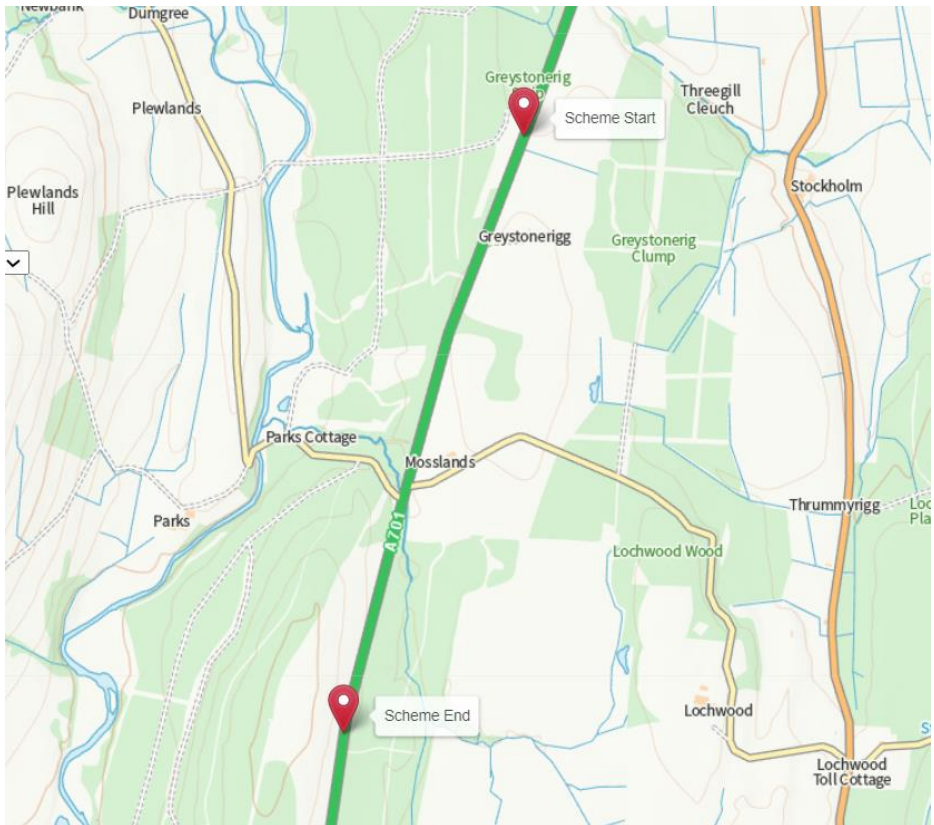
The works are located on a rural stretch of the A701 carriageway north of St. Ann's, within Dumfries & Galloway. The works have the following National Grid References:

- Scheme Start: NY 07909 98238
- Scheme End: NY 07406 96572

Figure 1 – Scheme Location



Figure 2 – Scheme Extents



Description of Local Environment

Population and Human Health

The scheme is located in a rural setting within Dumfries and Galloway, surrounded primarily by farmland. The A701 connects Dumfries with Beattock and the M74 carriageway.

There are two residential properties, Greystonerigg and Mosslands which are located within close proximity to the works, with the closest property situated approximately 70m east of the carriageway.

Access to both properties is located within the scheme extents.

There are no [Candidate Noise Management Area's](#) located within proximity to the works location.

There are no pedestrian or community facilities located within the scheme extents.

The Average annual daily flow (AADF) for the A701 carriageway within the scheme extents in 2019 accounted for 4,847 vehicles per day, with an average of with 11.6% heavy goods vehicles (HGVs).

The baseline noise levels are likely primarily influenced by vehicle traffic along the A701, with secondary influence likely from nearby agricultural practices.

Biodiversity

The works are located along a rural stretch of carriageway. Farmland dominates the surrounding landscape. A large area of plantation woodland (now felled) can be identified towards the northern end of the scheme. A thin strip of broadleaf woodland is located adjacent to the southbound carriageway.

A desktop study using [Nature Scot Sitelink](#) 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](#) has highlighted historical records of the following protected species within 2km of the scheme:

- Red squirrel *Sciurus vulgaris*
- Soprano pipistrelle *Pipistrellus pygmaeus*.

Several protected mammal species surveys have been carried out by the

Site Visit

A field survey was undertaken by the E&S Team in April 2021 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.

Areas of woodland located adjacent to the carriageway were surveyed for the potential presence of badger. Upon arrival, it was noted that the large section of woodland adjacent to the westbound carriageway had been felled, due to being plantation woodland.

A second, smaller area of woodland was surveyed adjacent to the southbound carriageway. The ground was highly waterlogged, with the forest floor covered in mosses and reeds. The area was largely flat and was deemed unsuitable for badger.

No evidence of recent badger activity or setts were found within the surveyed area.

Land

The A701 trunk road footprint within the scheme extents consists of a single-way carriageway.

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

On site work activities will be confined within the A701 carriageway boundary and will not require access over any private or community land.

Historic Environment Scotland's [HLAMap](#) has highlighted the following surrounding landscapes:

- Rectilinear Fields and Farms
- Managed Woodland
- Plantation.

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

Soil

Scotland's Environment Scotland's [Soils Map](#) has identified the local soil types within the scheme extents as brown earth and peat.

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

Bedrock Geology:

- Hawick Group - Wacke. Sedimentary Bedrock formed approximately 423 to 444 million years ago in the Silurian Period. Local environment previously dominated by deep seas.

Superficial Deposits:

- Till - Diamicton. Superficial Deposits formed up to 3 million years ago in the Quaternary Period. Local environment previously dominated by ice age conditions.

Water

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

A desktop study using the Scottish Environment Protection Agency's (SEPA) [Water Classification](#) Hub Interactive Map has identified the following classified water bodies in proximity of the works:

- “Kinnel Water u/s of Water of Ae” (ID: 10653) approximately 350m west of the scheme. SEPA has classified this waterbody as having an overall status of poor, and an ecological status of good.
- An unclassified ‘ford’ runs below the carriageway within the scheme extents.

SEPA's [Flood Risk Map](#) has identified areas of the A701 carriageway susceptible to surface water flooding.

Air

The works are located along a rural stretch of the A701 carriageway between Beattock and St. Ann's. Two residential properties are located within 100m of the works.

The AADF for the A701 carriageway within the scheme extents in 2019 accounted for 4,847 vehicles per day, with an average of with 11.6% heavy goods vehicles (HGVs).

No [Air Quality Management Areas](#) 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	<ul style="list-style-type: none"> • TS2010 surface course • AC32 Base • AC20 Binder • Bitumen • Road paint • Road studs 	<p>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.</p> <p>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.</p>

Waste

Table 2 – Key Waste Arising from Activities

Activity	Waste Arising	Disposal/ Regulation
Site Construction	<ul style="list-style-type: none"> • Road planings • Old studs • Tar 	<p>Two cores tested from the investigation phase were found to contain tar. Treatment designed to provide a lasting solution here would involve removal and disposal of some tar bound material.</p> <p>All 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>Uncontaminated road planings arising from the works may be recovered in accordance with the criteria stipulated within SEPA document 'Guidance on the</p>

Activity	Waste Arising	Disposal/ Regulation
		Production of Fully Recoverable Asphalt Road Planings’.

Cultural Heritage

A desktop study using [PastMap](#) has not identified any features of cultural heritage within proximity to 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 A701 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

- 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.
- Access to residential properties may be temporarily blocked or restricted.
- 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

- Dumfries and Galloways Council’s Environmental Health Team were contacted on the 12th of August 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, as well as any potential access restrictions.
- 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.

- Local access will be granted by site operatives when required.
- Operatives must be briefed with the Good Neighbours and Noise and Vibration toolbox talk before starting works.

The residual impact to population and human health is considered negligible during construction, and upon completion will be 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

- Additional on-site lighting may impact nearby nocturnal species.

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).

The 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 drainage/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.

- 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

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

- Two cores tested from the investigation phase were found to contain tar. Treatment designed to provide a lasting solution here would involve removal and disposal of some tar bound material.

Mitigation

- All tar-contaminated planings will require removal off site for treatment/disposal at a licenced waste facility.
 - A SEPA consignment note is required.
 - SEPA are to be informed at least three days prior to the movement of special waste.
- Uncontaminated 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.

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 12,483m² (1.2ha) 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).
- Uncontaminated road planings will be fully recycled in accordance with Guidance on the Production for Fully Recovered Asphalt Road Planings.
- Special waste will be disposed of in line with guidance.
- 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.

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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