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TRANSPORT SCOTLAND
CÒMHDHAIL ALBA

Environmental Impact Assessment Record of Determination

A75 Hetland Hall

Contents

Project Details

Description

The works are required to maintain the safety and integrity of the A75 carriageway, which is currently exhibiting signs of defects in the form of stretches of rutting and localised cracking (longitudinal and transverse), including isolated patches and areas of crazing. These defects indicate that the surface has reached the end of its serviceable life.

Construction works will involve a surface dressing treatment and patching works to repair the defective surface course over an approximate 1.9km stretch of the A75 carriageway.

Both surface course treatment and pre-patching works will utilise hot rolled asphalt (HRA). Pre-patching will be carried out to address any surface defects prior to dressing, with areas of cracking or rutting inlaid to a depth of 110mm with HRA surface course. Areas of the existing HRA which are showing surface defects will be inlaid with 50mm HRA surface course (existing depth) to provide a suitable surface for dressing.

Surface dressing will be undertaken across the entire scheme extents, with pre-patching works targeting localised deeper defect areas undertaken beforehand.

The proposed construction activities will entail the following general construction activities:

- Milling of existing bituminous material by road planer;
- Additional bituminous material removed by jack hammer/excavator, where not accessible by planer;
- Road sweeper to collect any loose material;
- HGV for removal and replacement of material;
- Tack/bond coat applied;
- New bituminous material laid by a paver;
- Material compacted using a heavy roller;
- New road markings/chevrons carried out where needed; and,
- Road studs replaced where necessary.

The works are programmed to commence 19th June 2023, with an approximate duration of three days. Working hours are expected to be during daytime.

Traffic management (TM) for the works will involve single lane closures facilitated by a convoy system. The A75 carriageway will remain open for the duration of the works.

Location

The works are located along a semi-rural stretch of the A75 carriageway, west of Carrutherstown, Dumfries and Galloway. The National Grid References (NGR) are detailed below:

- Start: NY 09725 71885
- End: NY 08062 72762

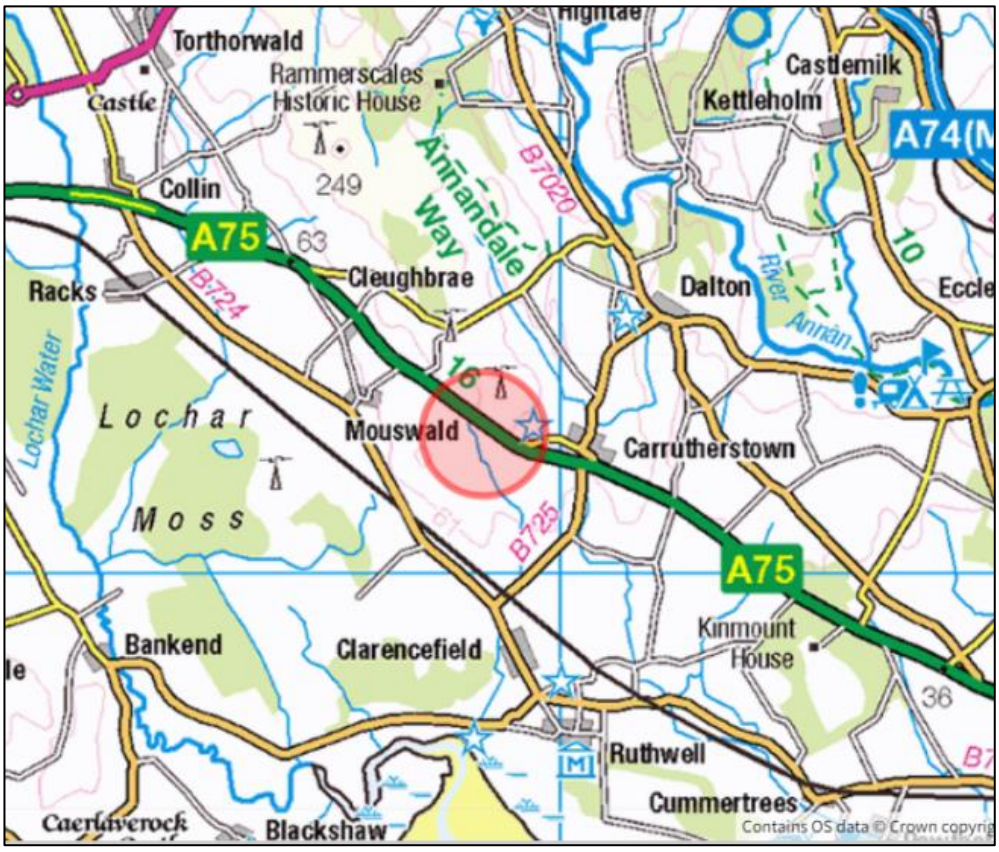

Figure 1: Scheme location

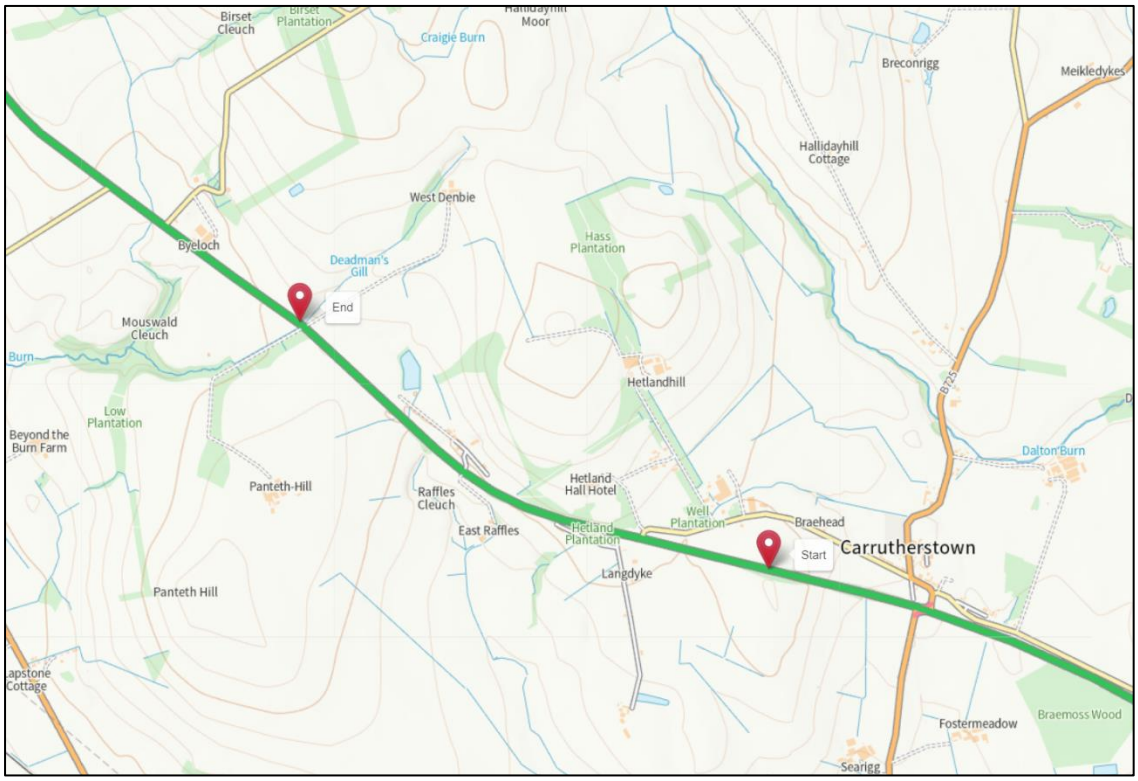

Figure 2: Scheme Location

Description of local environment

Air quality

The scheme is located along a rural section of the A75. The A75 is a major route connecting Dumfries and Annan and local areas such as Carruthersstown and Woodside. As such, air quality is affected due to the daily use of the carriageway by road vehicle users as well as nearby urban and agricultural activities.

The annual average daily traffic (AADT) for the scheme location in 2021 is 10,687 vehicles per day, with 14.32% heavy goods vehicles (HGVs).

There are approximately 10 sensitive air quality receptors within 50–200m of the scheme. The closest residential homes are Hetland Lodge, East Raffles Cottage and The Cottage, all are located 20m south of the westbound carriageway. Hetland Hall Hotel is located 120m north of the eastbound carriageway.

Dumfries and Galloway Council have not declared any Air Quality Management Areas (AQMA).

Cultural heritage

A desktop study using PastMap has identified the following features of protected cultural heritage within 300m of the scheme:

- Hetland House (LB3464), a Category B listed building located approximately 110m north of the westbound (WB) carriageway.
- Hetland Cottage (At Hetland Road-End) (LB3463), a Category B listed building located approximately 150m north of the westbound (WB) carriageway.

The works will be restricted to the existing carriageway and will not extend below already engineered layers. As such, no impact to these nearby features is predicted, and no change will occur for cultural heritage and has been scoped out of requiring further assessment.

Landscape and visual effects

A desktop study using PastMap has not identified any areas designated for landscape character located within, or within 300m proximity to, the works location.

Historic Environment Scotland's HLA Map has highlighted the scheme area and the surrounding landscape to consist of Rectilinear Fields and Farms. The views from the carriageway consist of agricultural lands, small hills and wooded strips.

The works will be undertaken within the existing carriageway boundary and will not impact upon adjacent land.

Works will be like for like in nature, restricted to the existing carriageway boundary, and will not have any permanent 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.

Biodiversity

The scheme is situated within a semi-rural area of Dumfries and Galloway. The A75 carriageway within the scheme extents is flanked by a combination of farmland, woodland and thin vegetated strips. There are several ponds within 250m of the carriageway.

A desktop study using NatureScot Sitelink indicates that there are no designated sites located within 2km of the scheme extents.

Amey's Invasive Non-Native Species (INNS) database has not highlighted any records of INNS within the scheme extents.

The scheme is located on a busy road network with high baseline noise levels and with the construction works being transient, and all personnel, plant and materials will remain restricted to the carriageway no survey was required.

Geology and soils

A desktop study using NatureScot Sitelink has not identified any areas designated for geology located within, or within proximity to, the works location.

The National Soil Map of Scotland identifies the local soil type as Brown soils. Brown soil is aerated, generally free draining and can rapidly decompose plant matter.

The works will be restricted to the existing carriageway and will have no impact on local geology or soils. The topic has been scoped out of the assessment.

Material assets and waste

Table 1 – Key Materials Required for Activities

Activity	Material Required	Origin/ Content
Site Construction	• Road surfacing (aggregate and binder); • HRA Surface Course • Bitumen; • High friction surfacing; • Siting/base material; • Binder; • Road paint; • Concrete; • Lubricant; • Vehicle fuel; • Oil.	Material will come from a suitable source using as few virgin material as possible. 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 stone mastic asphalt (SMA). As a result, the use of TS2010 will reduce the

Activity	Material Required	Origin/ Content
		usage of imported aggregates, and increase the use of a wider range of sustainable aggregate sources. All materials that can be, will be reused throughout the network.

Table 2 – Key Waste Arising from Activities

Activity	Waste Arising	Disposal/ Regulation
Site Construction	• Road planings, • Studs.	It is Amey policy to reuse or recycle as much waste material as possible. Where recycling is not feasible, waste material will be removed to a licenced waste facility. All waste must be transported by suitable licenced contractor and must be accompanied by correctly completed waste transfer note. Any pavement 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'. The Contractor is responsible for the disposal of road planings and this has been registered in accordance with a Paragraph 13(a) waste exemption issued by SEPA, as described in Schedule 3 of the Waste Management Licensing Regulations 2011.

Noise and vibration

There are approximately 10 sensitive noise receptors within 300m of the works. The closest residential homes are Hetland Lodge, East Raffles Cottage and The Cottage located 20m south of the westbound carriageway. Hetland Hall Hotel is located 120m north of the eastbound carriageway. These properties have small trees and hedgerows screening from the carriageway.

The surrounding noise sources within this area include road traffic noise with intermittent noise from agricultural activities.

The NoiseMap indicated that during day, evening and night, the carriageway is subject to noise levels of >70 to < 75 dB. The neighbouring properties are subject to >55 to <70 dB.

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

Population and human health

The works are located in a semi-rural setting west of Carrutherstown, Dumfries and Galloway, surrounded by agricultural land.

There are numerous accesses and egresses located within the scheme extents, giving access to the local road network, residential and agricultural properties: Hetland Lodge, East Raffles Cottage and The Cottage, West Raffles, Moochers Roost, Sequoia and Langdyke properties.

There are no provisions for pedestrians or cyclists, or bus stops within the scheme extents.

No carriageway lighting exists within the scheme extents due to the rural location.

Road drainage and the water environment

SEPA's Water Classification Hub has identified the river Pow Burn (ID: 100296) approximately 640m north east of the scheme at its closest point.

This waterbody has been given the following classification by SEPA:

- Overall status: Moderate ecological potential
  - Overall ecology: Bad
  - Water Quality: Good

Minor unclassified watercourses Deadmans Gill, Raffles Burn and several field drains/Issues flow below the A75 carriageway within the scheme extents. A reservoir of unknown use is located approximately 70m from the eastbound carriageway.

There are several unnamed and unclassified ponds and wells within 250m of the carriageway.

The Indicative River & Coastal Flood Map by SEPA has highlighted areas at 10% risk of surface water flooding on the carriageway within the scheme extents.

Drainage along this section of the carriageway is provided by filter drains.

Climate

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 CO_2 emissions by 80% before 2050 (from the baseline year 1990).

The Scottish Government has since published its indicative Nationally Determined Contribution (NDC) to set out how it will instead reach net-zero by 2045, working to reduce emissions of all major greenhouse gases by at least 75% by 2030. By 2040, the Scottish Government is committed to reduce emissions by 90%, with the aim of reaching net-zero by 2045 at the latest.

Transport Scotland is committed to reducing carbon across Scotland's transport network, this commitment is being enacted through the Mission Zero for Transport. Transport is the largest contributor to harmful climate emissions in Scotland. In response to the climate emergency, TS are committed to reducing their emissions by 75% by 2030 and to a legally binding target of net-zero by 2045.

Amey's Company Wide Carbon Goal is to achieve Scope 1 and 2 net-zero carbon emissions, with a minimum of 80% absolute reduction on our emissions by 2035. Amey is aiming to be fully net-zero, including Scope 3 emissions, by 2040.

Amey are working towards a contractual commitment to have carbon neutral depots on the SW NMC network by 2028. Amey have set carbon goals for the SW NMC contract as a whole to be net-zero carbon by 2032.

Monitoring, Management and Opportunities

To support our journey towards carbon neutral and zero waste we include potential opportunities for enhancement utilising circular economy principals within assessment of material assets.

Amey (working on behalf of Transport Scotland) undertake carbon monitoring. Emissions from our activities are recorded using Transport Scotland's Carbon Management System.

Further information identifying how Amey will obtain the above Carbon Goals can be viewed within the Carbon Management and Sustainability Plan Roadmap to net-zero: STRNMC – South West.

Description of main environmental impacts and proposed mitigation

Air quality

Impacts

- On site construction activities carry a potential to produce airborne particulate matter and generate emissions that may have a slight impact on local air quality levels.
- Dust generated during construction can negatively impact and irritate air quality receptors.

The impacts identified will be a temporary and localised for the duration of the works only and therefore no change is predicted on air quality.

Mitigation

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:

- All vehicles will be switched off when stationary; there will be no idling vehicles; and all fuel operated equipment will be regularly serviced.
- Works/plant use will be effectively managed to prevent dust creation. This will include, but not be limited to, the dampening down of cutting activities.
- All plant and fuel-requiring equipment utilised during construction will 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 will be undertaken prior to works.
- Planing operations will be wetted to reduce dust arising.
- Drop heights to haulage vehicles will be minimised.
- Lorries will be sheeted when carrying dry materials.
- Surfaces will be swept where loose material remains following planing.

Provided that best practice measures are followed as demonstrated in Amey risk control measures (RCMs), the proposed works will not have any direct or indirect significant impacts on the local air quality. This results in a neutral residual effect.

It has been determined that the proposed project will not have direct or indirect significant effects on local air quality; providing all works operate in accordance with current best practice, the residual impact for air is considered no change.

Biodiversity

Impacts

- There is potential for protected species to be active within, or within proximity to, the works area.
    - Daytime programming will reduce this likelihood however cannot rule out potential.

Construction effects on biodiversity will be localised, and the works are temporary and like-for-like in nature. As no vegetation cutbacks are required, it is unlikely there will be any significant effects on the surrounding biodiversity. While construction works may cause short-term disturbance to local biodiversity, this will be temporary and will not result in a permanent adverse impact.

The impacts identified will be a temporary for the duration of the works only and therefore no change is predicted on biodiversity.

Mitigation

- Site operatives will remain vigilant for the potential presence of protected species within the local area.
- In the event of observing a protected species on the live working site, all works will temporarily stop until the animal has moved on. The control room will be contacted for environmental record.
- In the unlikely event that a mammal hole (larger than a rabbit) is observed in or adjacent to the working area, then works will stop and the duty supervisor/Environmental Manager contacted.
- All plant, materials, vehicles, and personnel will be restricted to the carriageway.
- Site operatives will be briefed using the protected species briefings prior to works, which will be provided within site documentation as included in the Initial Environmental Review (IER).

With best practice mitigation measures in place the residual effects to biodiversity is considered to be neutral.

No significant effects are anticipated; therefore, no further assessment is required. The nature of the works in question, combined with the appropriate pollution prevention and control measures detailed within this document and the associated IER have allowed for this conclusion.

Material assets and waste

Impacts

- 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.
- The works will result in contribution to resource depletion through use of virgin materials.
- Greenhouse gas (GHG) emissions will be generated by material production and transporting to and from site.
- Transportation and recovery of materials/waste will require energy deriving from fossil fuel, a non-renewable source.

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 and associated emissions.
- Road planings generated (and not contaminated with coal tar) 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 contractor will adhere to waste management legislation and ensure they comply with waste management Duty of Care.
- Where there is potential for deeper treatment at areas of potential tar-containing material, any 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.

Temporary impact during construction is considered negligible adverse, with residual effect considered no change.

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

Noise and vibration

Impacts

- TS2010 road surfacing is shown to have superior durability and noise reducing features compared to standard road surfacing mixes.
- Works may result in increased noise compared to baseline levels during construction works. Due to daytime programming, impact to nearby residential properties is considered to be negligible.

Mitigation

- Plant/machinery will be fitted with silencers/mufflers. No plant, vehicles or machinery will be left idling when not in use.
- Plant and machinery will be switched off when not in use to reduce noise disruptions to the surrounding environment.

With best practice mitigation measures in place the residual effect to noise and vibration is considered to be neutral.

No significant effects are anticipated; therefore, no further assessment is required.

Population and human health

Impacts

- TM will involve single lane closures with convoy system within the scheme extents. This TM arrangement may have the following impacts:
    - Lane closures may cause delays to road users of the A75 carriageway and could potentially increase traffic levels on surrounding local roads. Impacts will be temporary during the construction phase only.
    - Local accesses within the scheme extents may be temporarily obstructed.
- TS2010 road surfacing is shown to have superior durability and noise reducing features compared to standard road surfacing mixes. Vehicle travellers and nearby residential properties will benefit from improved road surfacing as a result of the scheme.

Mitigation

- Any closures/diversion routes and any proposed restrictions/travel time impacts will be advertised locally in advance of the works. Diversion routes will be clearly signed.
- Accesses will remain clear were reasonably practicable. Where any obstruction occurs, operatives will grant local access as required.

- There will be temporary adverse construction impacts due to noise/disruption, however, the scheme will improve safety and quality for road users in the long-term.

It has been determined that the proposed project will not have direct or indirect significant effects on population and human health provided that mitigation measures and best practice is followed, the residual effect on population and human health is deemed neutral.

There are not anticipated to be any permanent impacts on population and human health following the completion of works.

No significant effects are anticipated; therefore, no further assessment is required.

Road drainage and the water environment

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 spills, leaks or seepage of fuels and oils associated with plant to escape and reach drainage systems and watercourses if not controlled, which may negatively affect the water environment.
- Road paint is acutely toxic to fish, plants and any animal dependant on the watercourse.
- Should flooding occur, this may delay the scheduled works.
- There are not anticipated to be any permanent impacts on road drainage or the water environment following the completion of works.

Mitigation

- Best practice, as detailed by SEPA Guidance for Pollution Prevention (GPPs), GPP1, GPP2, GPP5, PPG6, GPP8 and GPP22, will always be followed onsite. This will ensure that any potential sediments/spills are not allowed to enter road drainage unchecked.
- Appropriate measures will be implemented onsite to prevent any potential pollution to the natural water environment via nearby drains (e.g. debris, dust and hazardous substances). This will 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, and utilisation of drain covers/shielding boards.
- The Amey control room will be contacted if any pollution incidences occur.
- Visual pollution inspections of the working area will be conducted, especially during heavy rainfall and wind.
- Debris and dust generated as a result of the works will be prevented from entering the drainage system. This can be via the use of drain covers or similar.

- Site operatives will ensure that any paint materials are contained within the working area and does not enter any surface water drains or the environment.
- Site operatives will apply suitable controls to prevent the paint materials escaping to the surrounding environment:
  - All mixing of paints will take place a minimum of 10m away from watercourses and drains where possible.
  - All drains within proximity to any mixing will be securely covered or sealed off.
- Weather reports will be monitored prior to and during the works with all construction activities temporarily halting in the event of adverse weather/flooding event. The works will only continue when it is deemed safe to do so and run-off/drainage can be adequately controlled to prevent pollution.

Providing all works operate in accordance with site control measures and SEPA Guidance for Pollution Prevention (GPP), the residual effects for road drainage and water environment is considered neutral.

Overall, no significant effects are anticipated; therefore, no further assessment is required.

Climate

Impacts

- GHG emissions will be emitted through the use of machinery, vehicles and materials used (containing recycled and virgin materials) and transporting to and from site.

Mitigation

- Local suppliers will be used as far as reasonably practicable to reduce travel time and GHG emitted as part of the works.
- Vehicles/plant will 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 the above Material assets and waste section.
- To support the journey towards carbon neutral and zero waste, potential opportunities will be included for enhancement utilising circular economy principals within assessment of material assets.
- Amey (working on behalf of Transport Scotland) undertake carbon monitoring. Emissions from activities are recorded using Transport Scotland's Carbon Management System.

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

Vulnerability of the project to risks

As the works will be limited to the like-for-like replacement of the carriageway structure, there will be no change in vulnerability of the road to risk, or in severity of major accidents/disasters that would impact 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.

If flooding should occur, there is potential for the works to be delayed.

Assessment cumulative effects

The Scottish Road Works Commissioner's Interactive Map does not highlight any other works in the area at the time of construction.

Dumfries and Galloway Council's Planning Alert Portal does not highlight any proposed developments or planning applications on the A75 carriageway within proximity to the scheme.

Amey's current programme of works has not highlighted any works that are currently programmed to be undertaken near this section of the A75 which may result in a combined impact for users of the A75 carriageway.

Any future schemes will be programmed to take into account already programmed works, and as such any effect (such as from TM arrangements and potential construction noise) will be limited.

Assessments of the environmental effects

Following assessment as detailed within this Record of Determination, and provided that mitigation measures are in place and best practice is followed, the residual impact is deemed neutral and there will be no significant effects on the environment.

The following environmental surveys/reviews have been undertaken:

- A design Initial Environmental Review of the scheme, undertaken by the Environment and Sustainability Team at Amey in May 2023.

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.

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 approximate 18,500m^2 (1.8ha) area of existing carriageway.
- At end of life, components can be recycled, reducing waste to landfill.
- Road planings not contaminated with coal tar will be recycled in accordance with Guidance on the Production for Fully Recovered Asphalt Road Planings.
- 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.
- The design option conveys sustainability benefits by significantly reducing the quantity of maintenance interventions required at the location.

Location of the scheme:

- The scheme will be confined within the existing carriageway boundary 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:

- No significant residual effects are predicted. Disruption due to construction activities are temporary, localised and not expected to be significant and will be mitigated as far as is reasonably practicable.
- As the works will be limited to the like-for-like replacement of the structural components, 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.
- The successful completion of the scheme will afford benefits to residential properties in proximity, 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.
- No impacts on the environment are expected during the operational phase as a result of works.

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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