



**TRANSPORT  
SCOTLAND**  
CÒMHDHAIL ALBA

# **Environmental Impact Assessment Record of Determination**

## **A75 Henderland to Bettyknowes**

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## Project Details

### Description

The works are required to maintain the safety and integrity of a stretch of the A75 Henderland to Bettyknowes, within Dumfries and Galloway. The scheme is being undertaken as surface defects (fretting/chip loss) and structural defects (rutting/longitudinal/transverse/cracking) have been identified.

The works are being undertaken to conduct structural inlays from depths between approx. 30mm-300mm. Construction activities will be as follows:

- Implementation of TM.
- Milling of existing bituminous material by road planer.
- Additional bituminous material removed by jack hammer/excavator, where not accessible by planer.
- Resurfacing of carriageway using TS2010 surface course.
- Road sweeper to collect any loose material.
- Heavy Goods Vehicles (HGVs) for removal and replacement of material.
- New bituminous material laid by a paver.
- Material compacted using a heavy roller.
- Reinstatement of thermoplastic road markings where required.
- Road studs replaced where necessary.
- Removal of TM.

A detailed programme of works is still to be confirmed, however construction is scheduled to commence on 20<sup>th</sup> August 2023, with overnight road closure and the respective diversion route in place. During the daytime when the laid surface is cooling and the workforce are not present, a single lane of the A75 will reopen and traffic will be managed using a shuttle working system.

### Location

The scheme is located on the A75 west of Dumfries, Dumfries and Galloway. The scheme is located at the following National Grid References (NGRs):

- Start: NX 87076 74410
- End: NX 85746 73902

Please see Figure 2: Scheme Location below:

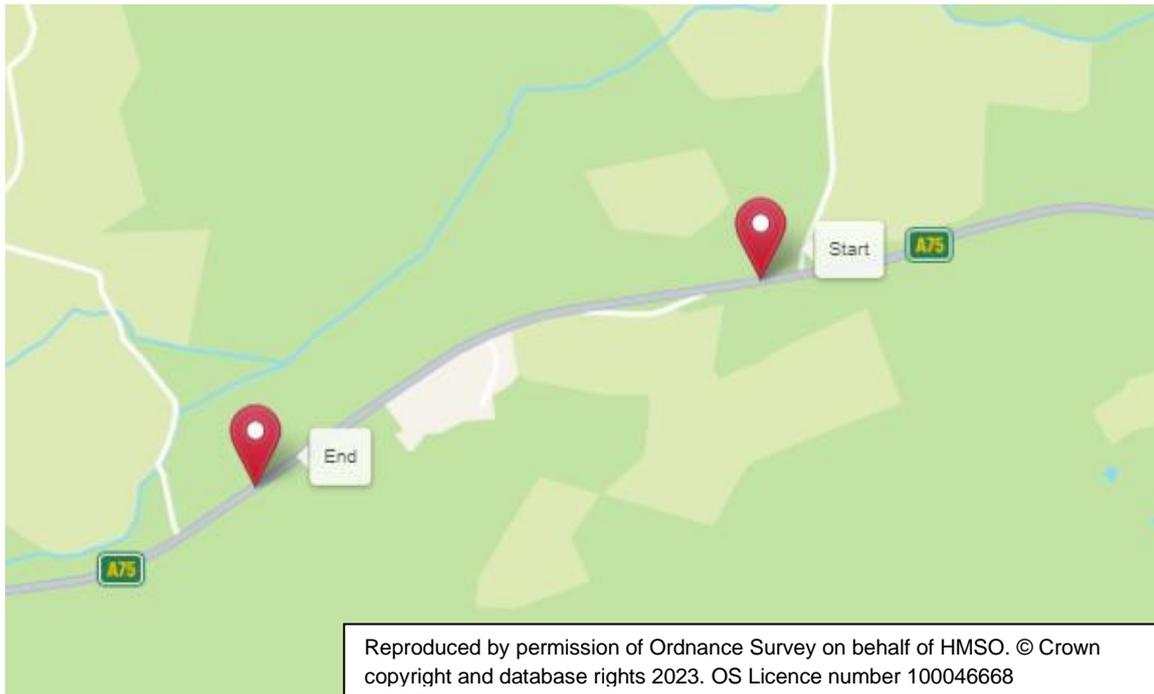


Figure 2: Scheme Location

## Description of local environment

### Air quality

The scheme is located on the A75 at the small village of Brae, west of Dumfries, Dumfries and Galloway. The scheme is in a predominately rural area, with less than 100 residential properties within 300m, the closest being Henderland Cottage approximately 10m south of the A75. The East Brae Cottage B&B is located approx. 20m north of A75.

In 2021, the Annual Average Daily Flow (AADF) for all vehicles on the A75 where works are to be undertaken (manual count point 10740) was 15,009, with 1,833 of those being HGVs.

Dumfries and Galloway Council have not declared any Air Quality Management Area (AQMAs).

## Cultural heritage

A desk study was undertaken using [Pastmap](#) which confirmed no cultural heritage designations within 300m of the scheme extent. The works are like-for-like in nature and will remain within the carriageway boundary and therefore any surrounding designations will not be impacted by the works. As a result, cultural heritage has been scoped out for further assessment.

## Landscape and visual effects

The scheme is located on the A75 at the small village of Brae, west of Dumfries, Dumfries and Galloway. The scheme is in a predominately rural area with large areas of farmland and woodland adjacent to the scheme.

A desk study was undertaken using [Pastmap](#) and [SiteLink](#) and the works do not fall within any areas designated for their landscape quality.

Views of, and from the road will be temporarily affected during construction due to the presence of works, traffic management and plant.

As the works are minor and operating on a like-for-like basis and will be restricted to the existing carriageway boundary/bridge, no permanent changes to landscape features are predicted. Therefore, landscape and visual has been scoped out of further assessment.

## Biodiversity

The scheme is in a predominately rural area with large areas of farmland and woodland adjacent to the scheme. This area of woodland has not been classed within the [Scotland's Ancient Woodland Inventory](#).

There are no European designated sites within 2km of the scheme. NatureScot's Sitelink resource has identified the [The Milton Loch Site of Special Scientific Interest \(SSSI\) which](#) is approximately 1.9km southwest of the scheme and is designated for its beetle assemblage and freshwater habitats.

[AMPS](#) and the [Amey Southwest Environmental Database](#) note that there are no Invasive Non-Native Species (INNS) within 500m of the scheme.

## Geology and soils

A desktop study using [SiteLink](#) has not identified any Geological Conservation Review sites or SSSI's designated for their geological features within 2km of the scheme extents.

[Scotland's Soils Map](#) notes the soils within the scheme extent as being made up of brown soils.

[The British Geology Viewer](#) notes the geological features as being:

- Bedrock Geology – Carghidown Formation – Wacke.

The works will be restricted to the existing carriageway boundary/bridge and will have no impact on local land or soils. Therefore, geology and soils has been scoped out for further assessment.

## Material assets and waste

Table 1: Key Materials Required for Activities

Activity	Material Required	Origin/ Content
Site Construction	<ul style="list-style-type: none"> <li>• Road surfacing (aggregate and binder);</li> <li>• Bitumen;</li> <li>• Road paint and studs;</li> <li>• Lubricant;</li> <li>• Vehicle fuel;</li> <li>• Oil.</li> </ul>	<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 <a href="#">aggregate sources</a>.</p> <p>A proportion of RAP is used in asphalt production. Typical RAP values for base and binder are 10% - 15% with up to 10% in surface course.</p>

Table 2: Key Waste Arising from Activities

Activity	Waste Arising	Disposal/ Regulation
Site Construction	<ul style="list-style-type: none"> <li>• Road Planings</li> <li>• Removed iron/metal components</li> <li>• Tar bound materials</li> </ul>	<p>Uncontaminated road planings generated as a result of the required works, will be fully recycled in accordance with the criteria stipulated within SEPA document '<a href="#">Guidance on the Production of Fully Recoverable Asphalt Road Planings</a>'.</p> <p>All materials that can be, will be reused throughout the network.</p> <p>All waste will be stored in secure containers and segregated into different waste streams.</p> <p>All special waste, such as tar bound materials, will be transported by a licenced contractor to a licenced waste facility.</p>

## Noise and vibration

The scheme is located on the A75 at the small village of Brae, west of Dumfries, Dumfries and Galloway. The scheme is in a predominately rural area, with less than 100 residential properties within 300m, the closest being Henderland Cottage approximately 10m south of the A75. The East Brae Cottage B&B is located approx. 20m north of A75.

There are some large areas of woodland screening the scheme from the village of Brae and surrounding residential properties.

[Scotland's Noise Map](#) notes that noise levels on the A75 where works are to be undertaken range between 65-<75dB during daytime hours, and range between 55-<65dB during night-time hours. The main noise source in the area is a result of traffic and vehicles on the A75.

The scheme is not located within a [Candidate Noise Management Area \(CNMA\)](#).

## Population and human health

There are two bus stops along the A75 where works are to be undertaken.

[The Bettyknowes to Shawhead Core Path \(IRON/72/1\)](#) runs from the north to the south where it stops at the edge of the A75 at Bettyknowes. No [National Cycle Network Routes](#) are present within 300m of the scheme extents.

The area within the scheme extents does not have permanent lighting.

## Road drainage and the water environment

Bettyknowes Burn (ID: 10600) is approximately 245m north of the scheme. The Scottish Environment Protection Agency (SEPA) [Water Classification Map](#) notes that Bettyknowes Burn is considered to be in moderate condition. The SEPA [Flood Risk Map](#) notes it has a 'high-risk' of river flooding. There are several unnamed burns as well as drains within 200m of the scheme, however no classification or flood risk data is available.

There are no areas of 'high-risk' surface water flooding on the A75 where works are to be undertaken.

The drainage on this section of the A75 the carriageway is via gullies which run either side.

## Climate

### Carbon Goals

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<sub>2</sub> 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 temporary impact on local air quality levels.
- TM implemented during the scheme may result in an increase in vehicle emissions through idling vehicles and increased congestion. This may result in a temporary deterioration in local air quality.

The impacts identified will be temporary 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 Institute of Air Quality Management (IAQM), which includes the following mitigation relevant to this scheme will be followed:

- All vehicles will switch off engines when stationary; there will be no idling vehicles.
- All plant and fuel-requiring equipment utilised during construction will be well maintained in order to minimise emissions.
- Planing operations will be wetted to reduce dust arising.
- Drop heights to haulage vehicles and onto conveyors will be minimised where practicable.
- Lorries will be sheeted when carrying dry materials.
- Surfaces will be swept where loose material remains following planing.

The residual significance of effects is considered not significant and does not warrant any further assessment in accordance with DMRB Guidance document LA 105: Air Quality.

## Biodiversity

### Impacts

- An increase in noise levels has the potential to disturb any protected species nearby.
- Misdirected site lighting could cause disturbance to any surrounding nocturnal species or protected species.

### Mitigation

- Due to night-time programming, where lighting is required, hoods will be used and lights directed at works and away from ecological receptors including any watercourses, to minimise disturbance to nocturnal species.
- In the event that protected species is noticed on site, works will be temporarily suspended until the animal has moved on. Any sightings will be reported to the E&S Team.
- Vehicles and materials will not be stored or parked on grass verges where possible. Where damage occurs, the reinstatement of the grass verge will be carried out.
- In the unlikely event that an INNS is identified on site, all works must temporarily stop and the environment team contacted.
- 'Soft start' techniques will be utilised with noise heavy equipment/plant/machinery in order to deter any potential noise sensitive species present in the area. This technique will act as a deterrent to the recipients and allows for any potential damage to the recipients to be mitigated as incremental increases in noise levels are made.
- Operatives will receive a toolbox talk on protected species.

On the condition that the above mitigation measures and best practice are adhered to, the residual effect on local biodiversity is considered not significant.

Therefore, in accordance with DMRB Guidance document LA 108: Biodiversity, no further assessment is required.

## 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.

- Transportation and recovery of materials/waste will require energy deriving from fossil fuel, a non-renewable source.
- Tar bound materials were identified during the investigation coring.

### **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.
- The contractor will adhere to waste management legislation and ensure they comply with waste management Duty of Care.
- Uncontaminated road planings arising from the works will be fully recycled under a SEPA Paragraph 13(a) Waste exemption in accordance with guidance on the Production for Fully Recovered Asphalt Road Planings.
- All waste leaving the site will be removed from site by a licence waste carrier. All waste documentation will be provided when requested.
- The disposal of special waste is also subject to obtaining a SEPA consignment note and providing advance notice of at least three days prior to any waste movement.
- Use of TS2010 will reduce the usage of imported aggregates and increase the use of a wider range of sustainable aggregate sources thus reducing GHG emissions.
- Where possible, materials will be obtained locally, and operatives deployed from the local depot where possible to reduce haulage and scheme associated journeys, reducing impact of associated GHG emissions on climate change.
- Where possible all materials will be reused throughout the network, if not possible they will be recycled locally. Not all materials will be able to be reused/recycled and will require landfilling.
- The use of TS2010 Surface Course will prolong the period before future resurfacing is required, compared to other types of road surface. Future repairs can be able to be carried out easily via inlay.

It has been determined that the proposed project will not have direct or indirect significant effects on 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. Vehicle travellers and nearby receptors will benefit from the improved road surfacing as a result of the scheme.

- Noise heavy works are required during night-time hours, which could cause disturbance for the nearby amenity users. It is also anticipated that noise heavy works could cause day-time disturbance.

### **Mitigation**

- The noisiest works will be completed before 23:00 where feasible.
- Plant/machinery will be fitted with silencers/mufflers.
- No plant, vehicles or machinery will be left idling when not in use.
- 'Soft start' techniques will be utilised with noise heavy equipment/plant/machinery in order to deter any potential noise sensitive species present in the area. This technique will act as a deterrent to the recipients and allows for any potential damage to the recipients to be mitigated as incremental increases in noise levels are made.
- The Amey Noise & vibration briefing will be delivered to all site operatives before works start.
- Due to night-time programming, Dumfries and Galloway Council have been notified prior to works. Residential properties within 300m will be notified.

With best practice mitigation measures in place, the residual construction effects associated with Noise and Vibration is considered not significant.

Therefore, in accordance with DMRB Guidance document LA 111: Noise and Vibration no further assessment is required.

## **Population and human health**

### **Impacts**

- TM will likely cause travel delays for road users.
- The works will improve the quality of the road and therefore will benefit road users.
- It is yet to be confirmed as to whether bus stops will be impacted by the works but in the event that closure of the bus stops is required, a temporary bus stop will be put in place.

### **Mitigation**

- TM restrictions/arrangements and any expected travel delays will be publicised within the local and wider area, in an effort to minimise disturbance to vehicular travellers.
- Due to night-time programming, Dumfries and Galloway Council have been notified prior to works. Residential properties within 300m will be notified.

With best practice mitigation measures in place, the residual construction effects associated with Population and Human Health is considered not significant.

Therefore, in accordance with DMRB Guidance document LA 112: Population and Human Health 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 and coastal 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 distant water environment.
- Should flooding occur, this may delay the scheduled works.

### Mitigation

- All debris which has the potential to be suspended in surface water and wash into the local water environment will be cleaned from the site following the works.
- 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.
- Appropriate measures will be implemented onsite to prevent any potential pollution to the natural water environment (e.g., debris, dust, and hazardous substances). This will include spill kits being present onsite at all times, and the use of funnels and drip trays when transferring fuel etc.
- The Amey control room will be contacted if any pollution incidences occur.
- Visual pollution inspections of the working area will be conducted in frequency, especially during heavy rainfall and wind.
- Weather reports will be monitored prior and during all construction activities. In the event of adverse weather/flooding events, all activities will temporarily stop, and only reconvene when deemed safe to do so, and run-off/drainage can be adequately controlled to prevent pollution.
- Prior to works commencing, all operatives will be briefed on [SEPA's Guidance for Pollution Prevention \(GPP\) documents](#) (particularly GPP 1, GPP 2, GPP 5, PPG 6, GPP 8 and GPP 22).

Providing all works operate in accordance with current best practice, as demonstrated by the Scottish Environmental Protection Agency's (SEPA) GPPs, the residual effect on Road Drainage and the Water Environment is considered not significant.

Therefore, in accordance with DMRB Guidance document LA 113: Road drainage and the water environment no further assessment is required.

## Climate

### Impacts

- Greenhouse Gas (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.

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 resurfacing of the carriageway, 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.

## Assessment cumulative effects

[The Scottish Road Works Commissioner's Interactive Map](#) has not highlighted any ongoing works during the proposed timescale and at the location of the proposed works.

[Amey's current programme of works](#) has not highlighted any ongoing works during the proposed timescale and at the location of the proposed works.

[Dumfries and Galloway Council's Planning Portal](#) has not highlighted any ongoing works during the proposed timescale and at the location of the proposed works.

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.

Overall, it is unlikely the proposed works will have a significant cumulative effect with any other proposed works in the local area.

## 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:

- An Initial Environmental Review of the scheme, undertaken by the Environment and Sustainability Team at Amey in June 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 10,500m<sup>2</sup> area of existing carriageway.
- No impacts on the environment are expected during the operational phase as a result of works. 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.
- The works will be temporary and localised and completed potentially during both daytime and night-time hours.
- No disturbance is anticipated to protected species within the wider area.

- At end of life, components can be recycled, reducing waste to landfill.
- 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.
- 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.

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:

- Containment measures of the working area will be in place to prevent debris or pollutants from entering the surrounding water environment.
- Any uncontaminated road planings 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.
- Tar bound materials were identified during the investigation coring which will be transported by a licenced contractor to a licenced waste facility.

## 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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