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Environmental Impact Assessment Record of Determination

A78 Pennyburn Roundabout to Dubbs Road Southbound

Contents

Project Details

Description

Works are required to maintain the safety and integrity of a 2,018m stretch of the A78, south of Kilwinning in North Ayrshire covering an area of 2ha. Resurfacing works are required on the southbound carriageway due to surface defects and structural defects identified across the carriageway. These include fretting, potholing, alligator cracking, rutting and some isolated cracks.

Construction activities will consist of structural inlays, ranging in depth from approximately 30mm-300mm. Treatment will involve using TS2010 surface course. The activities will be as follows:

- Implementation of Traffic Management (TM);
- Milling out the existing material to the proposed treatment depths by road planer;
- Paver will be used to lay the new road surface and inlays using TS2010 surface course 10mm aggregate and AC binder and base if required;
- Road will be flattened and compacted using a roller;
- Reinstatement of road markings, linings and studs; and,
- Removal of TM.

The following (but not limited to) plant/machinery/vehicles may be used throughout the scheme:

- Planer;
- Paver;
- Wagon(s);
- Bitumen tank;
- Extrusion liner;
- Paint tanker;
- Roller.

The proposed works are programmed to be completed within the next financial year (from April 2025) during night-time hours for a duration of 10 days.

TM is still to be confirmed but will likely consist of full night-time lane closures on the southbound carriageway. A diversion route will be put in place utilising the B714, A78 and A738.

Location

The scheme is located along a stretch of the A78, south of Kilwinning in North Ayrshire. The scheme extents can be found at the following National Grid References (NGRs):

- Scheme Start - NS 28123 42676
- Scheme End - NS 29897 42108

See Figure 1: Scheme Location below.

Figure 1: Location and Scheme extents.

Description of local environment

Air quality

There are approximately four residential properties within 200m of the scheme extents, with the closest residential property being located 113m south on Dubbs Road. Other sensitive air quality receptors include the following:

- Todhill Country Centre located approximately 45m south of the scheme extents.
- The Red Squirrel by Marston's Inns located approximately 61m north of the scheme extents.

The baseline air quality levels are likely to be influenced by the traffic flow travelling along the A78 carriageway. This is evident from data collected at the manual count point (40760) located within the scheme extents. In 2023, the Annual Average Daily Flow (AADF) for all motor vehicles was 33,802, with 1,466 of these being Heavy Goods Vehicles (HGVs).

North Ayrshire Council have not declared any Air Quality Management Areas (AQMAs).

There are no sites registered on the Scottish Pollutant Release Inventory (SPRI) within 1km of the scheme extents.

Cultural heritage

A desk-based assessment has been undertaken using Pastmaps. A study area of 300m has been used for designated cultural heritage assets and an area of 200m for non-designated cultural heritage assets.

There are no designated cultural heritage assets located within 300m of the scheme extents.

See Table 1 below for full details of non-designated cultural heritage assets.

Table 1: Non-Designated Cultural Heritage Assets within 200m

NAME	REFERENCE NUMBER	DESCRIPTION	DISTANCE FROM SCHEME
Archaeological Evaluation: A78 Ardrossan, Saltcoats And Stevenston Bypass, North Ayrshire	5418	Historic Environment Record (HER) - Archaeological Event Record	Within the scheme extents
Archaeological Evaluation: Pennyburn Roundabout, Castlehill Road, Stevenston	4840	HER - Archaeological Event Record	Approx. 65m north of the scheme extents
Stevenston, Kilwinning Road, Supermarket	292776	Canmore – Supermarket (Modern)	Approx. 150m southwest
Stevenston, Kilwinning Road, Supermarket	88622	HER - Supermarket (Modern)	Approx. 150m southwest
Historic Environment Appraisal: West Byrehill Industrial Estate, Kilwinning, North Ayrshire	5048	HER - Archaeological Event Record	Approx. 10m north adjacent to the scheme extents
Todhill Country Centre	373822	Canmore - No Class (Event) (Period Unassigned)	Approx. 140m south
Watching Brief: Todhill Country Centre, Stevenston, North Ayrshire	6890	HER - Archaeological Event Record	Approx. 140m south
Bradan To Dreghorn Pipeline	359098	Canmore - Mine Workings (Period Unassigned), Unidentified Pottery(S) (Post Medieval), Unidentified Pottery(S) (Medieval)	Approx. 85m south
Archaeological Watching Brief: Bradan To Dreghorn Pipeline	6290	HER - Archaeological Event Record	Approx. 85m south
Todhill Farm	41055	Canmore - Crannog (Period Unassigned)	Approx. 110m south
Todhill Farm / Penny Burn	5630	HER - Crannog	Approx. 110m south
Kilwinning, Bridge	184206	Canmore - Bridge (Period Unassigned)	Approx. 83m south
Kilwinning, Bridge	75175	HER - Bridge (Period Unassigned)	Approx. 83m south

As works are like-for-like structural inlays within the existing carriageway boundary, there will be no impacts on any cultural heritage assets identified or on potential unknown archaeological remains and therefore cultural heritage has been scoped out of further assessment.

Landscape and visual effects

The scheme is located along a stretch of the A78, south of Kilwinning in North Ayrshire. The carriageway is bordered by vegetation and shrubs with dense, deciduous trees in some areas. Agricultural fields surround the scheme extents to the north, east and south. Residential properties dominate the wider area of the north and west making up the towns Kilwinning and Stevenston. There are no distinctive historical landscape features within the scheme extents.

According to Scotland's Environment Web, there are no National Scenic Areas, Tree Preservation Orders (TPOs), Ancient Woodlands or any Gardens & Designed Landscapes within 500m of the scheme extents.

A search on Scotland's Historic Land Use Assessment (HLA) Map has identified that the land within the scheme extents was previously categorised as 'Motorway and Major Roads'. The surrounding land was previously used as 'Rectilinear Fields and Farms' and 'Industrial or Commercial Area'.

Scotland's Landscape Character Type (LCT) Map classifies the scheme location as '60 - Low-Lying Coast', characterised by low lying areas and estuarine landscapes.

The views from the carriageway are predominantly of mature trees; where trees are scarce, residential properties can be seen.

Due to vegetation coverage, the only receptors that will have views of the works are located along Dubbs Road. The works will also be visible to Todhill Country Centre located approximately 45m south due to vegetation sparsity in this area. No other businesses or recreational areas will have views of the works.

Biodiversity

The carriageway is bordered by vegetation and shrubs with dense, deciduous trees in some areas. Agricultural fields surround the scheme extents to the north, east and south. Garnock/Irvine Estuary is located approximately 300m southeast of the scheme extents.

A desktop study using NatureScot's Sitelink online research tool has not highlighted any European designated sites within 2km of the scheme extents or any national

designations, such as Sites of Special Scientific Interest (SSSI) within 200m of the scheme extents.

The following target species and Invasive Non-Native Species (INNS) can be found within 500m, however, none of which are located within the scheme extents:

- Himalayan balsam (*Impatiens glandulifera*)
- Giant hogweed (*Heracleum mantegazzianum*)
- Rosebay willowherb (*Chamerion angustifolium*)
- Japanese knotweed (*Fallopia japonica*)
- Common ragwort (*Jacobaea vulgaris*)

A search on Transport Scotland's Asset Management Performance System (AMPS) has identified Rosebay willowherb (*Chamerion angustifolium*) and Creeping thistle (*Cirsium arvense*) along the verge of the A78 carriageway within the scheme extents.

The scheme and the surrounding habitat have been reviewed by a senior ecologist utilising desktop resource. As a result, the need for a field survey was scoped out due to the nature of the works and due to the fact that all works will be restricted to the existing carriageway boundary.

Geology and soils

There are no Geological Conservation Review Sites (GCRS), Local Geodiversity Sites or any Geological SSSIs that have connectivity or lie within 200m of the scheme extents according to Sitelink.

According to Scotland's Soils Map, the soil within the scheme extents has been identified as Brown earths, Noncalcareous gleys and Mineral alluvial soils with peaty alluvial soils. The national land capability for agriculture within the works area has been classed as '3.1'. This land is capable of producing consistently high yields of a narrow range of crops and/ or moderate yields of a wider range. Short grass leys are common.

A search on Britain's Geology Viewer has highlighted that the geology within the scheme extents along the A78 consists of the following:

Bedrock Geology

- Troon Volcanic Member - Basalt, olivine-macrophyric. Igneous bedrock formed between 329 and 319 million years ago during the Carboniferous period.

- Scottish Lower Coal Measures Formation - Sedimentary rock cycles, coal measure type. Sedimentary bedrock formed between 319 and 318 million years ago during the Carboniferous period.

Superficial Deposits

- Till, Devensian - Diamicton. Sedimentary superficial deposit formed between 116 and 11.8 thousand years ago during the Quaternary period.
- Raised Marine Deposits of Holocene Age - Clay, silt, sand and gravel. Sedimentary superficial deposit formed between 11.8 thousand years ago and the present during the Quaternary period.
- Alluvium - Clay, silt, sand and gravel. Sedimentary superficial deposit formed between 11.8 thousand years ago and the present during the Quaternary period.

As the works will be restricted to the existing carriageway boundary and previously engineered layers, it has been determined that the proposed project does not carry the potential to cause direct or indirect impact to geology or soils. As such, impact has been assessed as being 'no change' and has been scoped out of requiring further assessment.

Material assets and waste

A site waste management plan (SWMP) will be required for this scheme.

The works are required to resurface the worn carriageway and reinstate road markings and studs. Materials used will consist of:

- TS2010 surface course;
- AC20 bituminous binder;
- AC32 bituminous base;
- Aluminium/glass/reflective lenses for road studs; and,
- Road marking paint

Wastes are anticipated to be asphalt planings from the carriageway surface course and coal tar recorded from coring logs within scheme extents. The Contractor is responsible for the disposal of uncontaminated road planings, and this will be registered in accordance with a Paragraph 13(a) waste exemption issued by the Scottish Environment Protection Agency (SEPA), as described in Schedule 3 of the Waste Management Licensing Regulations 2011. Road planings containing coal tar will be classed as special waste and removed to an appropriately licenced waste management facility.

Noise and vibration

There are approximately 15 residential properties located within 300m of the scheme extents, the nearest property is located 113m south on Dubbs Road. Other sensitive noise and vibration receptors include the following:

- Todhill Country Centre located approximately 45m south of the scheme extents.
- The Red Squirrel by Marston's Inns located approximately 61m north of the scheme extents.
- Kilwinning Ambulance Station located approximately 220m north of the scheme extents.

Due to vegetation coverage, the only receptors that will have natural screening of the works are located along Dubbs Road. No businesses or community facilities will experience screening.

The works do not lie within a Candidate Noise Management Area (CNMA) as highlighted by Transport Scotland's Transportation Noise Action Plan (2019-2023).

Baseline noise and vibration level is mainly influenced by the traffic flow along the A78 carriageway. Scotland's Noise Map has highlighted that the noise level (Lden) recorded during daytime hours ranges from approximately 60dB to 73dB. During nighttime hours, the noise level (Lden) was recorded to range from 56dB to 60dB.

The volume of traffic along the A78 is demonstrated from manual count point 40760 located within the scheme extents. In 2023, the AADF for all motor vehicles was 33,802 with 1,466 of these being HGVs.

Population and human health

A study area of 300m was used in this assessment as works are unlikely to impact any receptors beyond 300m.

The area is relatively urbanised with approximately 15 residential properties located within 300m of the scheme extents, the nearest property is located 113m south on Dubbs Road.

Community facilities and businesses within the study area include the following:

- Todhill Country Centre located approximately 45m south of the scheme extents.
- The Red Squirrel by Marston's Inns located approximately 61m north of the scheme extents.

- Kilwinning Ambulance Station located approximately 220m north of the scheme extents.

Core Path IK27 is the only core path within 300m of the scheme extents. This core path crosses directly underneath the A78 at NGRs: NS 29182 42260 within the scheme extents. This route is also National Cycle Network Route 73, connecting the town of Kilmarnock to Ardrossan.

There are no bridleways within 300m of the scheme extents.

There are also no footpaths, bus stops, streetlights or any access/egress points to residential properties within the scheme extents.

There is one layby within the scheme extents located at NGRs: NS 29321 42210.

Road drainage and the water environment

According to the Scottish Environment Protection Agency (SEPA)'s Water Classification Hub, Garnock/ Irvine Estuary (ID: 200022) is located approximately 300m southeast of the scheme extents. This watercourse has an overall 'good' ecological potential. There are no other classified watercourses within 500m of the scheme extents.

Penny Burn flows through the scheme extents at NGRs NS 28261 42584. This watercourse is unclassified on SEPA's map.

SEPA's Flood Risk Map has highlighted that Garnock/Irvine Estuary has a high likelihood of river flooding that extends into the works area, suggesting that each year, this area has a 10% chance of flooding. There are also multiple areas within the scheme extents that are susceptible to surface water flooding.

The groundwater within the scheme extents consists of Kilmarnock groundwater, (ID: 150662), which has an overall 'poor' quality.

The works do not fall within a Nitrate Vulnerable Zone (NVZ).

Drainage within the scheme extents consists of gullies along either side of the A78 carriageway.

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_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.

Policies and Plans

This Record of Determination (RoD) has been undertaken in accordance with Roads (Scotland) Act 1984 (Environmental Impact Assessment) Regulations 2017 (RSA EIA Regulations) along with Transport Scotland's Environmental Impact Assessment Guidance (Guidance – Environmental Impact Assessments for road projects (transport.gov.scot)). Relevant guidance, policies and plans accompanied with the Design Manual for Roads and Bridges (Design Manual for Roads and Bridges (DMRB)) LA 101 and LA 104 were used to form this assessment.

Description of main environmental impacts and proposed mitigation

Air quality

Impacts

- 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.
- During construction activities, such as removal of old road surface, there is the potential for an increase in particulate matter, dust and emissions from plant and machinery that will cause a nuisance to nearby receptors. This is also likely to cause a slight deterioration in air quality within the local area. These impacts will last for the duration of the works only.
- Post construction there will be no change to the traffic volume, speed or road alignment as works are like-for-like.
- All identified impacts will be temporary, lasting only for the duration of the works, with no lasting change expected in air quality.

Mitigation

- The following best practice as outlined in the Guidance on the assessment of dust from demolition and construction (2024) 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.
    - Site layout will be planned (including plant, vehicles and Non-Road Mobile Machinery (NRMM)) so that machinery and dust causing activities are located away from receptors, as far as reasonably practicable.
    - 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 will be minimised where practicable.
    - Lorries will be sheeted when carrying dry materials.
    - Surfaces will be swept where loose material remains following planing.
- Green driving techniques will be adopted, and effective route preparation and planning undertaken prior to works.
- Surfaces will be swept where loose material remains following planing

- Plant, vehicles and NRMM will be regularly maintained, paying attention to the integrity of exhaust systems to ensure such fuel operated equipment is not generating excessive fumes.

No significant effects are predicted on air quality. Therefore, in accordance with DMRB Guidance document LA 105: Air Quality no further assessment is required.

Landscape and visual effects

Impacts

- The works will have a temporary and short-term impact on the landscape during construction due to the presence of HGVs, plant and machinery. As the works are minor and operating on a like-for-like basis, no permanent changes to landscape features are predicted.
- Due to nighttime programming, misdirected site lighting may cause disturbance to nearby visual receptors.
- Views of and from the A78 carriageway will be temporarily affected during construction due to the presence of works, TM and plant.

Mitigation

- Temporary site lighting used throughout the scheme will be directional and pointed only at the area of works.
- Plant, vehicles, materials etc. will be contained to hardstanding areas within the carriageway boundary (as far as reasonably practicable).
- Throughout all stages of the works, the site will be kept clean and tidy, with materials, equipment, plant and wastes appropriately stored, reducing the landscape and visual effects as much as possible.

With mitigation measures and best practice in place, it is anticipated that any landscape and visual effects associated with the resurfacing works are unlikely to be significant. Therefore, in accordance with DMRB Guidance document LA 107: Landscape and Visual Effects, no further assessment is required.

Biodiversity

Impacts

- An increase in noise levels and misdirected site lighting has the potential to disturb any protected species nearby.
- Works will be confined to the carriageway boundary, involving like-for-like carriageway resurfacing with no earthworks to avoid spread of any INNS. Should

this not be possible, and there is any disturbance to the verge of the A78, works have the potential to cause the spread of Transport Scotland target species rosebay willowherb and common ragwort.

Mitigation

- Due to nighttime 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 unlikely event that a protected species is noticed on site, works will be temporarily suspended until the animal has moved on. Any sightings will be reported to the ET&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.
- 'Soft start' techniques will be utilised with noise heavy equipment/plant/machinery in order to avoid disturbance to any potential noise sensitive species present in the area.
- As part of the NMC, Amey, on behalf of transport Scotland, has been asked to keep a record of various target species, including rosebay willowherb and common ragwort. Works will not be carried out in the carriageway verge. If this is not possible and works are likely to result in the spread of this species through disturbance, the Amey's Landscaping Team will be consulted.

With the above mitigation measures and best practice being adhered to, no significant effects on biodiversity are anticipated. Therefore, in accordance with DMRB Guidance document LA 108: Biodiversity, no further assessment is required.

Material assets and waste

Impacts

- Transportation and recovery of materials/waste will require energy deriving from fossil fuel, a non-renewable source.
- 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.
- There will be an increase in waste to landfill should waste materials not be recycled or reused.

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.
- Materials will be delivered on site when required, rather than stockpiled.
- The Contractor will comply with all 'Duty of Care' requirements, ensuring that any surplus materials or wastes are stored, transported, treated, used, and disposed of safely without endangering human health or harming the environment. All waste transfer notes and/or waste exemption certificates will also be completed and retained.
- 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.
- 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.
- All special waste, such as road planings containing coal tar, will be transport by suitable licenced contractor and will be accompanied by correctly completed special waste consignment note (SWCN) providing information about the waste, the producer and the person the waste is being handed to; the SWCN will be kept for three years, the Site Responsible Manager is responsible for ensuring these are retained onsite.
- All waste leaving the site will be removed from site by a licence waste carrier. All waste documentation will be provided when requested.
- This scheme is in excess of £350k and therefore requires a Site Waste Management Plan.

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. Therefore, in accordance with DMRB Guidance document LA 110: Material Assets and Waste, no further assessment is required.

Noise and vibration

Impacts

- There may be an increase in noise levels during construction due to the use of heavy plant and machinery and an increase in HGVs.
- 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.

- Works will likely be undertaken during nighttime programming. As such, any residential properties within 300m may experience temporary disturbance due to an increase in noise and vibration levels.
- There are no anticipated permanent impacts on noise and vibration following the completion of works.
- TM may cause an increase in noise and vibration level due to idling vehicles and potential congestion.

Mitigation

- Due to nighttime programming, Amey's Energy Transition & Sustainability Team has notified North Ayrshire Council in advance of the works.
- A letter drop will be delivered to residents within 300m to notify them of upcoming works, timings and duration.
- Effects from noise will 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.
- Unnecessary revving of engines will be avoided and equipment switched off when not in use.
- Drop heights of materials will be minimised.
- 'Soft start' techniques will be utilised with noise heavy equipment/plant/machinery in order to avoid disturbance.
- On-site construction tasks will be programmed to be as efficient as possible, with a view to limiting noise disruption to local sensitive receptors. The noisiest works will be undertaken before 23:00 where possible.
- Amey's environmental briefing, Noise and Vibration will be delivered to site operatives prior to construction.

With best practice mitigation measures in place, and due to the works being of a minor, temporary, transient nature, no significant effects are predicted for noise and vibration. Therefore, in accordance with DMRB Guidance document LA 111: Noise and Vibration no further assessment is required.

Population and human health

Impacts

- TM has potential to cause temporary levels of disruption to road users (i.e. congestion and increased travel times).
- There will be no impact on land take from private land and/or community facilities as a result of the scheme.

- Due to nighttime programming, construction site lighting during nighttime hours could cause disturbance for residential properties in close proximity, and for the nearby amenity users.
- Access to the residential properties and community assets identified will not be impacted by the works as there are no access/egress point to these receptors.
- Core path IK27 and national cycleway 73 will not be impacted by the works.

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.
- Temporary site lighting used throughout the scheme will be directional and pointed only at the area of works.
- Any change of schedule will be communicated to local residents throughout the work programme.

With best practice mitigation measures in place, no significant effects associated with Population and Human Health are predicted. 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, such as the Garnock/ Irvine Estuary or Penny Burn.
- 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 adversely impact the 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 control room will be contacted if any pollution incidences (24 hours, 7 days a week).
- 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.
- Site operatives will be given the Water Pollution Prevention toolbox talk prior to works.

Providing all works operate in accordance with current best practice, no significant effects are predicted on the water environment. In accordance with DMRB Guidance document LA 113: Road drainage and the water environment, 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.
- Further actions and considerations for this scheme are detailed in the above Material assets and waste section.

With best practice mitigation measures in place, the residual significance of effect on climate is considered to be neutral. Therefore, in accordance with DMRB Guidance document LA 114: Climate, no further assessment is required.

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 project is not expected to alter the vulnerability of the existing trunk road infrastructure to risk of major accidents or disasters.

Assessment cumulative effects

According to Amey's Current Works Schedule and the Scottish Road Works Commissioner, there are no works scheduled to be carried out within the proposed works time and location.

North Ayrshire Council's Planning Portal also does not indicate any scheduled works that will be carried out the proposed works location and time.

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 that the proposed works will have a significant cumulative effect with any other proposed works in the local area. Considering the nature and scale of the maintenance works being undertaken, no in combination effects are anticipated.

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 and sensitive receptors.

The following environmental surveys/reviews have been undertaken:

- An Environmental Scoping Assessment (ESA) of the scheme, undertaken by the Energy Transitions & Sustainability Team at Amey in January 2025.

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:

<u>Characteristics of the scheme:</u>

- 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. No impacts on the environment are expected during the operational phase as a result of works.
- The successful completion of the scheme will afford benefits to carriageway users and residential properties in proximity, due to improved condition and ride quality of the carriageway surface.
- No negative 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 will decrease post construction.

- Construction activities are restricted to the existing carriageway boundary within made ground and as such there will be no residual change to the local landscape as a result of the works.
- Works are not expected to result in significant disturbance to protected species that may be present in the wider area.
- At end of life, some components can be recycled, reducing waste to landfill.
- 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 boundaries (total area 2ha.) and as a result will not require any land take and will not alter any local land uses.
- Works are not located within an area designated for its specific landscape character or quality.
- The scheme is not situated in whole or in part in a sensitive area.

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 and drainage.
- Measures will be in place to ensure appropriate removal and disposal of waste and 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.
- Any potential impacts of the works are expected to be temporary, non-significant, and limited to the construction phase.
- No in-combination effects have been identified.

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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