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Environmental Impact Assessment Record of Determination

A8 Marypark Rd to Inverclyde Boundary Westbound

Contents

Project Details

Description

Works are required to maintain the safety and integrity of a section of the A8 carriageway. There are currently areas of both transverse and longitudinal cracking, as well as worn high friction surfacing and areas of fretting/chip loss.

Construction work will involve the milling and replacing of the defective surface course (including Marypark Road and Finlaystone junctions) over an approximate 1,280m stretch of the A8 carriageway, with targeted structural inlays where required. The total works area is approximately 11,538m^2 (1.15ha)

The treatment will consist of a surface course replacement using TS2010 material with isolated deeper inlays being utilised, should any structural defects be identified. The proposed construction activities will entail the following:

- 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.
- Road studs replaced where necessary.

These works are programmed to take place in May 2022, with exact dates and timings yet to be confirmed. The works are likely to be undertaken during night-time programming.

Traffic Management (TM) will involve either single lane or full closure or the WB carriageway. In the event of full closure, an appropriate diversion route will be in place, with exact diversion route yet to be confirmed.

Location

The scheme is located on a semi-rural section of the A8 carriageway between Port Glasgow and Langbank, located within both Inverclyde and Renfrewshire. The National Grid References (NGRs) for the scheme extents are given below:

- Scheme Start: NS 37564 73490
- Scheme End: NS 36414 73905

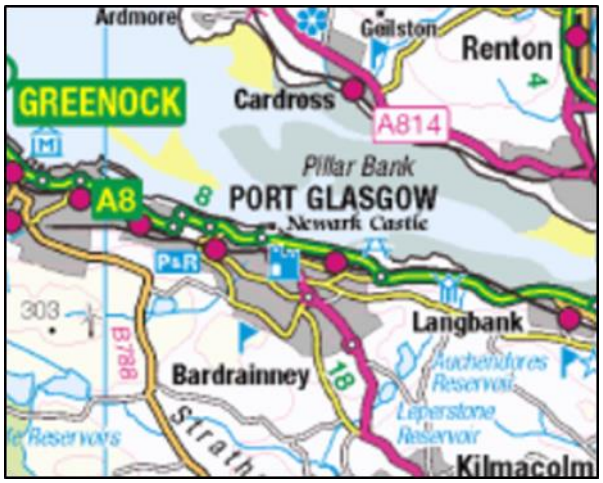

Figure 1 - Scheme Location

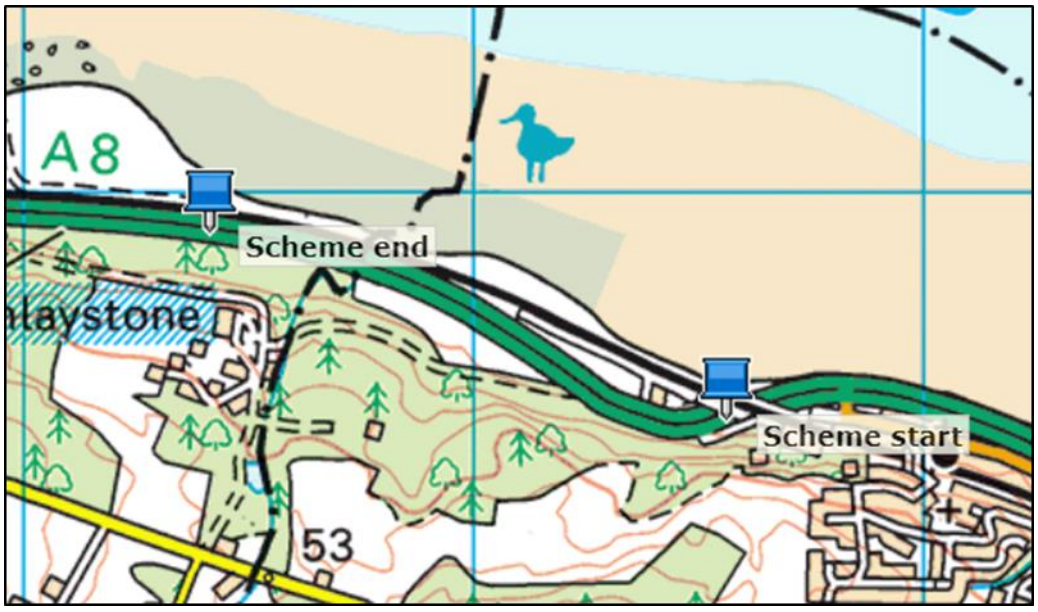

Figure 2 - Scheme Extents

Description of local environment

Air quality

This stretch of the A8 carriageway falls within a semi-rural, coastal section of Inverclyde/Renfrewshire. Surrounding landscape consists of woodland, areas of scrub/grazing, and coastal features. A railway line is located adjacent to the EB carriageway for the full scheme extent.

The A8 is a key route through Inverclyde. In 2020, this section of carriageway had an annual average daily flow (AADF) of 20,903 vehicles, with 3.8% of these being Heavy Goods Vehicles (HGV).

The scheme location does not fall within any Air Quality Management Areas declared by Renfrewshire council. Inverclyde council has not declared any AQMAs.

Cultural heritage

A desktop study using PastMap has identified the following features of cultural heritage within proximity of the proposed scheme:

- Category B listed building, East Lodge of Finlaystone House, located approx. 5m from the EB carriageway at the eastern scheme extent.
- A Scheduled Monument, Timber Ponds, located approx. 60m north of the A8 carriageway, which extends along the full extent of the scheme.
- Garden and Designed Landscape (GDL), Finlaystone House, which encompasses the woodland adjacent to the WB carriageway for the full scheme extent.

Works will be restricted to the existing carriageway boundary and already engineered layers and will not impact upon the surrounding landscape or have potential to impact on any undiscovered features of cultural heritage.

It has been determined that the proposed project will not have direct or indirect significant effects to features of undiscovered cultural heritage.

Landscape and visual effects

This stretch of the A8 carriageway falls within a semi-rural, coastal section of Inverclyde/Renfrewshire. Surrounding landscape consists of woodland, scrub/rough grazing and coastal features. Vegetated strips flank the carriageway for the majority of the scheme.

Historic Environment Scotland's HLAMap has highlighted the surrounding landscape as a combination of managed woodland, seashore, designed landscape, and rectilinear fields and farms.

Finlaystone House GDL encompasses the woodland adjacent to the WB carriageway for the full scheme extent. No additional areas designated for landscape quality or special characteristics have been highlighted within proximity to the works location.

Works will be restricted to the existing carriageway boundary and will not impact upon the surrounding landscape. 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 operating on a like-for-like basis, no permanent changes to landscape features are predicted.

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

Biodiversity

The scheme is located along the A8 carriageway within a semi-rural coastal setting, between Port Glasgow and Langbank. Areas of woodland and rough grazing surround the proposed scheme, and Clyde estuary is located to the north.

A desktop study using Nature Scot's Sitelink online interactive map has highlighted the following designated sites located within close proximity to the scheme extents:

- Inner Clyde: RAMSAR, located approx. 70m north of the scheme at the closest point. This site has been designated for presence of Redshank *Tringa totanus*, (non-breeding).
- Inner Clyde: Special Protection Area (SPA), located approx. 70m north of the scheme at the closest point. This site has been designated for presence of Redshank *Tringa totanus*, (non-breeding).
- Inner Clyde: Site of Special Scientific Interest (SSSI), located approx. 70m north of the scheme at the closest point. This site has been designated for presence of Cormorant *Phalacrocorax carbo* (non-breeding) & Eider *Somateria mollissima* (non-breeding).

Amey's Roadkill Database (2000 – 2022) has not highlighted any record of protected species roadkill within the scheme extents.

Amey's Invasive Non-Native Species (INNS) has highlighted two records of Himalayan balsam *Impatiens glandulifera* at the western scheme extents. These growths are located beyond the train line which runs adjacent to the EB carriageway.

The NBN Atlas (2012-2022) has highlighted the following protected species (as per commercially available records) within 2km of the scheme location:

- Soprano pipistrelle *Pipistrellus pygmeaus*
- Brown long-eared bat *Plecotus auritus*

Field Survey

A field survey was undertaken by the Amey E&S Team in August 2021. No evidence of protected species was noted in the adjacent woodland.

Signs of protected species were noted along the Finlaystone Burn which likely acts as a passage route from woodland to the coastal water of the Inner Clyde, under both the A8 road and rail lines. No holts or resting up sites were noted within 30m of the A8.

Consultation

Wintering birds redshank *Tringa tetanus,* cormorant *Phalacrocorax carbo*, and eider *Somateria mollissima* reside in the nearby Inner Clyde estuary during the wintering period between August and March.

NatureScot were consulted to advise of the proposed works located within proximity of Inner Clyde RAMSAR, SPA and SSSI, designated for wintering bird presence.

Response from NatureScot confirmed that as long as works were undertaken out with this wintering period (August to March), no impact is predicted for the qualifying features of these sites, as they will not have arrived back on migration during the period when the works are ongoing.

Geology and soils

The National Soil Map of Scotland identifies the local soil type as brown earths.

A desktop study using the British Geological Survey Map identifies the local geology type as the following:

- Bedrock:
  - Inverclyde Group - Sandstone with Subordinate Argillaceous Rocks and Limestone. Sedimentary Bedrock formed approximately 345 to 359 million years ago in the Carboniferous Period. Local environment previously dominated by rivers.
- Superficial Deposits:

- Raised Marine Deposits of Holocene Age - Clay, Silt, Sand and Gravel. Superficial Deposits formed up to 2 million years ago in the Quaternary Period. Local environment previously dominated by shallow seas (U).

All works will operate on a like-for-like basis and remain restricted within the existing carriageway footprint. No excavations beyond the existing engineered footprint will be required as part of the works, and as such no soils will be impacted.

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

Material assets and waste

Key Materials Required for Activities

Materials

The following materials are required for the works:

- AC32 Base
- AC20 binder,
- TS2010 SMA Surface course
- Road paint
- Vehicle fuel
- Oil

Origin / Content

A proportion of reclaimed asphalt pavement (RAP) is used in asphalt production. Typical RAP values for base and binder are 10% -15% with up to 10% in surface course.

TS2010 Surface Course allows a wider array of aggregate sources to be considered when compared to typical SMA. As a result, the use of TS2010 will reduce the usage of imported aggregates and increase the use of a wider range of sustainable aggregate sources.

Key Waste Arising from Activities

Waste Arising

The following waste materials will be produced as a result of the activities:

- Road planings
- Removed pavement foundation and bounding material

Disposal / Regulation

Following on-site coring investigations and testing, no coal-tar was identified within the surfacing of the carriageway within the scheme extent.

As such, road planings generated as a result of the works may be recovered in accordance with the criteria stipulated within SEPA document 'Guidance on the Production of Fully Recoverable Asphalt Road Planings'.

Noise and vibration

The scheme is located on a semi-rural section of the A8 carriageway, which is a key route through Inverclyde. In 2020, this section of carriageway had an annual average daily flow (AADF) of 20,903 vehicles, with 3.8% of these being Heavy Goods Vehicles (HGV).

A railway line travels adjacent to the EB carriageway for the full scheme extent.

There are approximately three residential properties within close proximity to the scheme extents, the closest of which (East Lodge), is located approx. 20m north of the WB carriageway.

The ambient noise levels are likely to be influenced by vehicle and railway traffic, in addition to various agricultural and urban land use practices within the surrounding environment.

The scheme falls within Candidate Noise Management Area (CNMA) number 72, Greenock Road.

Population and human health

Inverclyde's Core Path 42 travels alongside the carriageway from the scheme end to midway while Renfrewshire Core Path LAN/1 runs alongside the WB carriageway for the full scheme extent.

There are two accesses, which lead to the local road network, within the scheme extents.

Road drainage and the water environment

A desktop study using the Scottish Environment Protection Agency (SEPA) River Basin Management Plan Interactive Map has identified the Clyde Estuary, which flows approx. 70m north of the scheme at its closest point. This has been given an overall status of 'Moderate Ecological Potential' by SEPA.

Finlayston Burn (unclassified by SEPA) flows below the carriageway within the scheme extents, and outflows into the Clyde Estuary.

The Indicative River & Coastal Flood Map by SEPA highlights significant areas at risk of river, surface, and coastal water flooding within the scheme extents.

Road drainage is provided by a combination of side and top entry gullies and filter channel drainage throughout the scheme.

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 CO2 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.

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

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

Description of main environmental impacts and proposed mitigation

Air quality

Impacts

- Traffic Management (TM) for the works is yet to be confirmed, however will likely involve overnight closures of the WB carriageway, facilitated by an appropriate diversion route, which is yet to be confirmed.
    - Diversion routes, if required, will result in increased traffic levels and associated vehicle emissions on the surrounding local road network, due to requirement for a diversion route.
- The use of vehicles, plant and generators emitting carbon emissions may temporarily affect air quality and will require the use of finite resources.
- On site construction activities carry a potential to produce airborne particulate matter that may have a slight impact on local air quality levels.

Mitigation

- Diversion route, if required, will be effectively planned to reduce traffic levels in the surrounding road network to that which is as minimal as possible.
- All works shall operate in accordance with current best practice as outlined in the Guidance on the assessment of dust from demolition and construction (2014) published by the IAQM, which includes the following mitigation relevant to this scheme:
    - When not in use plant and vehicles will be switched off; there will be no idling vehicles.
    - All plant and fuel-requiring equipment utilised during construction shall be well maintained in order to minimise emissions, as per manufacturing and legal requirements.
    - Green driving techniques will be adopted, and effective route preparation and planning shall be undertaken prior to works.
    - Planing operations will be wetted to reduce dust arising.
    - Drop heights to haulage vehicles and onto conveyors will be minimised.
    - Lorries will be sheeted when carrying dry materials.
    - Surfaces will be swept where loose material remains following planing.

Providing all works operate in accordance with current best practice, the residual impact for air is considered neutral.

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

Biodiversity

Impacts

- No impacts are predicted to the nearby designated sites, as agreed by NatureScot.
    - In the event that programming changes and works are required to be undertaken within the wintering bird period (August to March), there is potential for disturbance to nearby wintering birds.
- There is potential for protected species to be active within the local surrounding area.
- In the event of night-time programming, misdirected site lighting could cause disturbance to any surrounding nocturnal species.
- In the event of night-time programming, additional noise from construction activities could cause disturbance to any surrounding nocturnal species.
- INNS is located behind a railway line, and as such is not likely to be present within the area of works.

Mitigation

- All temporary lighting will be directional and pointed away from sensitive ecological receptors, such as wooded areas.
- In the event of observing a protected species on the live working site, all works will temporarily stop until the mammal animal has moved on. The control room will be contacted for environmental record.
- Noise mitigation measures as outlined in the *Noise and Vibration* section below will be adhered to during the works.
- In the event of a change to programming resulting in the works being undertaken within the wintering bird period (August-March), the following will be undertaken:
    - Habitats Regulations Appraisal (HRA) Stage 1 Screening will be undertaken by an Amey Ecologist, to determine likely significant effects (LSE), or rule out LSE;
    - Further consultation with NatureScot, if required.

On the condition that best practice is adhered to, residual impact to local biodiversity is considered neutral as a result of the works.

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

Material assets and waste

Impacts

- 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.
- Waste will be treated at a licenced facility to separate useful materials such as metal as far as reasonably practicable, recovering this waste and diverting it from landfill.
- 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.
- Road planings generated will be recovered by a licenced contractor for re-use and/or recycling in accordance with the criteria stipulated within SEPA document 'Guidance on the Production of Fully Recoverable Asphalt Road Planings'.

It has been determined that the proposed project will not have direct or indirect significant effects to the consumption of material assets or disposal 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 improved road surfacing as a result of the scheme.
- There is potential for temporary disturbance to nearby residential properties due to an increase in baseline noise levels from construction works.

Mitigation

- Inverclyde and Renfrewshire Council's Environmental Health Teams will be notified of night-time working, if required. This will be undertaken by the Amey E&S Team.
- Residential properties within proximity (as highlighted by a pre-notification map issued to the design team) shall be notified prior to the works starting; detailing the nature, timings and duration of works along with traffic management arrangements.
- Plant and machinery will be switched off when not in use to reduce noise disruptions to the surrounding environment.
- Engine exhaust and vent silencers shall be used where possible.
- Where feasible, noisy works will be undertaken before 23:00.
- Operatives will avoid extraneous noise whilst on site and will be briefed using Noise and Vibration environmental briefing.

Provided that best practice measures are followed, it is predicted that residual impact from noise will be neutral, with temporary slight adverse impact predicted during construction.

It has been determined that the proposed project will not have direct or indirect significant effects to local noise and vibration.

Population and human health

Impacts

- Traffic Management (TM) for the works is yet to be confirmed, however will likely involve overnight closures of the WB carriageway, facilitated by an appropriate diversion route, which is yet to be confirmed.
- Presence of works/TM may result in temporary obstruction of local accesses
- Presence of works/TM may result in temporary obstruction of the adjacent footway/Core Path.
- In the event of a diversion, TM will result in increased travel times for users of the A8 carriageway during the works, which can lead to driver frustration.
- TS2010 road surfacing will be utilised. TS2010 can improve the skid resistance of the road.
- The use of TS2010 is shown to have superior durability to standard road mixes as such this will extend the life span of the carriageway preventing the need for reoccurring routine maintenance and associated levels of disruption.

Mitigation

- Site operatives will grant local access if obstructed by presence of works/TM.
- If works result in obstruction of the adjacent footway/Core Path, operatives will establish an alternative appropriate route to allow pedestrians of all ability to pass-by the works.
- In the event of a diversion, advance traffic warning signs will be placed prior to works in an effort to minimise disturbance to vehicular travellers, and will inform road users of expected duration, timings, and any temporary traffic management arrangements and diversions.
- Appropriate dust suppression systems will be used in order to effectively control construction dust. This shall include dampening down of cutting/breaking out activities where appropriate.

Provided that best practice measures are followed, it is predicted that residual impact to population and human health will be neutral, with temporary slight adverse impact predicted during construction.

It has been determined that the proposed project will not have direct or indirect significant effects to local population and human health.

Road drainage and the water environment

Impacts

- 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 affect the water environment if not effectively controlled.
- If not appropriately controlled, debris, sediment and run off from the works has the potential to enter nearby drains and watercourses and could detrimentally impact water quality.
- There is potential for flooding to occur within the works area.
- In the event of a flooding incident, the works will carry an increased risk of allowing fine sediments/debris to become mobilised in surface water

Mitigation

- Best practice, as detailed by SEPA Guidance for Pollution Prevention (GPPs), will always be followed onsite. This will ensure that any potential sediments/spills are not allowed to enter road drainage unchecked.
- Appropriate measures shall be implemented onsite to prevent any potential pollution to the natural water environment (e.g. debris, dust and hazardous substances). This will include, but will not be limited to, 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.

- Any pollution incidences will be reported to the Amey control room.
- Operatives will conduct regular checks of the surrounding ground/drains for any spillages/leakage regularly, especially in periods of heavy wind and rainfall.
- All debris which has the potential to be suspended in surface water and wash into the local water environment shall be cleaned from the site following the works.
- Weather reports shall be monitored prior to 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 when 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 impact for water is considered neutral.

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

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 greenhouse gas emitted as part of the works.
- Vehicles/plant shall not be left on when not in use to minimise and prevent unnecessary emissions being emitted.
- Further actions and considerations for this scheme are detailed in 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 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.

Assessment cumulative effects

Amey's current programme of works features nearby schemes programmed for May and June 2022, including A8 Finlaystone to Langbank and A8 Inverclyde Sign to Woodhall. The combined construction of these scheme may result in a combined effect on nearby receptors, such as vehicular travellers and residential/sensitive properties.

A review of Inverclyde Road Works and Road Works Scotland has not highlighted any upcoming or current works that may have a potential cumulative effect on the local population or users of the A8 carriageway.

Impact will be mitigated through effective planning of traffic management and diversion routes (where required). The cumulative works may result in a temporary slight adverse impact during construction, with a residual slight beneficial impact on local population.

Any future Amey 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.

Assessment of the environmental effects

Following assessment 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 Environmental and Sustainability Team at Amey in September 2021.

- High-level HRA screening was undertaken in July 2021 to determine any LSE on nearby sensitive sites, supplemented by consultation with NatureScot via email.

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 11,538m^2 (1.15ha) area of existing carriageway.
- At end of life, components can be recycled, reducing waste to landfill.
- 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.
- Road planings will be fully recycled in accordance with Guidance on the Production for Fully Recovered Asphalt Road Planings.
- 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 and as a result will not require any land take and will not alter any local land uses.
- The scheme is not located within, however is located within proximity to a “sensitive area” as listed under regulation 2 (1) of the Environmental Impact Assessment (Scotland) Regulations 1999 (as amended).

- Consultation with NatureScot confirmed that, due to programming out with the wintering bird period (August to March), no impact is predicted to the quantifying features of the nearby designated sites.

Characteristics of potential impacts of the scheme:

- 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 significant residual impacts are predicted. Disruption due to construction activities are not expected to be significant and will be mitigated as far as is reasonably practicable.
- The successful completion of the scheme will afford benefits to residential properties in proximity, due to improved condition and ride quality of the carriageway surface, and improved carriageway drainage.
- The use of TS2010 road surfacing affords the benefits of a reduction in mid to high frequencies of traffic noise and a reduction in ground vibrations. As a result, ambient noise levels should decrease post construction.

Annex A

"sensitive area" means any of the following:

- land notified under sections 3(1) or 5(1) (sites of special scientific interest) of the Nature Conservation (Scotland) Act 2004
- land in respect of which an order has been made under section 23 (nature conservation orders) of the Nature Conservation (Scotland) Act 2004
- a European site within the meaning of regulation 10 of the Conservation (Natural Habitats, &c.) Regulations 1994
- a property appearing in the World Heritage List kept under article 11(2) of the 1972 UNESCO Convention for the Protection of the World Cultural and Natural Heritage
- a scheduled monument within the meaning of the Ancient Monuments and Archaeological Areas Act 1979
- a National Scenic Area as designated by a direction made by the Scottish Ministers under section 263A of the Town and Country Planning (Scotland) Act 1997
- an area designated as a National Park by a designation order made by the Scottish Ministers under section 6(1) of the National Parks (Scotland) Act 2000.

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