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Record of Determination

M8 Cora Campus to Junction 31 West Bound

Contents

Project Details

Description

The works are required to maintain the safety and integrity of the M8 westbound carriageway within the 2km scheme extents. Road surfacing within the scheme extents is currently showing signs of severe fretting, transverse cracking and possible composite pavement. TS2010 surface course will be used to repair the damaged carriageway, with possible deeper treatment using AC 32/20 binder and base.

If composite pavement is confirmed the scheme will be considered for crack and seat.

The package of works is set to take place in July 2021 for the duration of one weekend. Working hours will likely consist of day and night-time working. Renfrewshire Council's Environmental Health Team were contacted in February regarding the required works and provided no comment.

Traffic management will involve a full weekend closure facilitated with diversion via the A8 carriageway.

Location

The scheme is found along a coastal rural part of Renfrewshire, northwest of Bishopton and east of Port Glasgow. The scheme has the following National Grid References:

- Scheme Start: NS 41947 72808
- Scheme End: NS 39984 72985

The length of the scheme is approximately 2km with an area of approximately 15,000m^2.

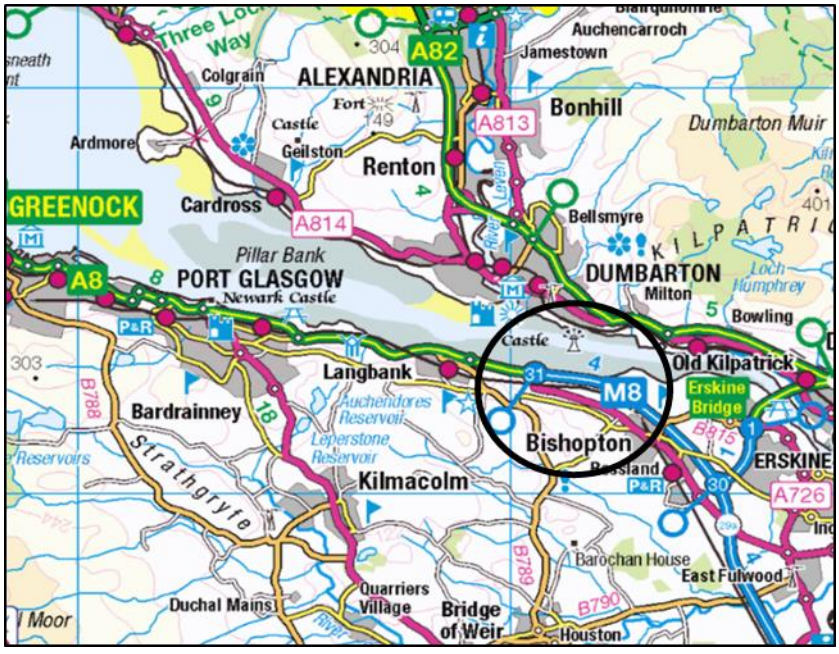

Figure 1 - Scheme Location

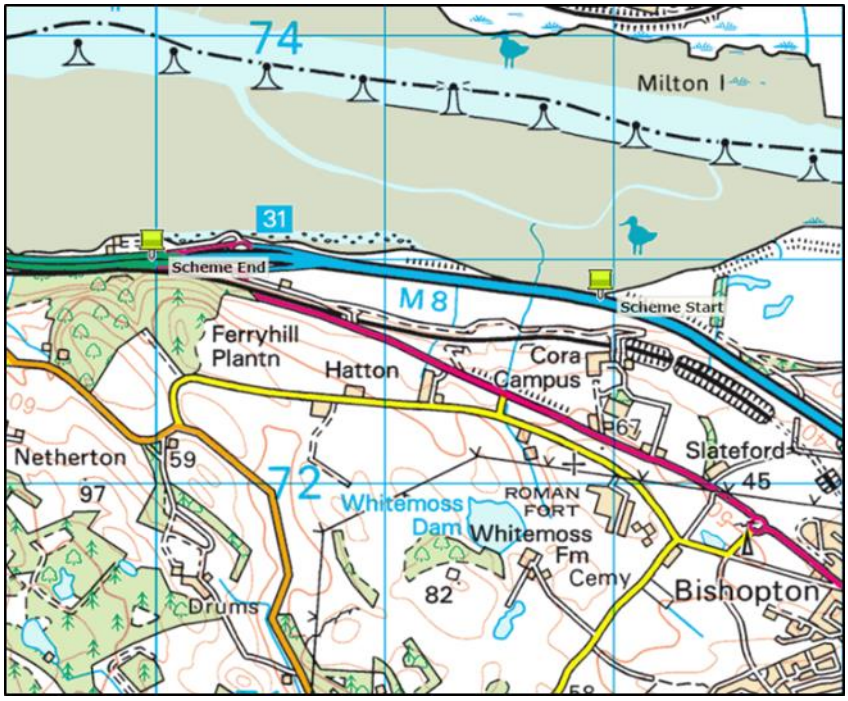

Figure 2 - Scheme Extents

Description of Local Environment

Population and Human Health

The scheme falls within the coastal rural setting of Renfrewshire. The Clyde Estuary is found north of the scheme, and rectilinear fields and farms are found south of the carriageway. A plantation also exists south of the western extent.

There are two residential properties located within proximity of the scheme extents. Fornet Cottage is located approximately 120m south of the WB carriageway and No.3 West Ferry exists approx. 100m north of the western scheme extent. Immediately behind Fornet Cottage, a rail track and Greenock Road exist.

Traffic count in 2019 accounted for 12,653 vehicles per day, with an average of 11.1% heavy goods vehicle.

Core Path LAN/6 is present towards the western extents of the scheme. This Core Path joins onto the western extent of the scheme and travels adjacent to the WB carriageway. Metal rails are present which separates the path from the carriageway. On and off-slip roads are also present within the scheme extents.

The works do not fall within a Candidate Noise Management Areas (CNMA) as defined by the Transportation Noise Action Plan, Road Maps.

Baseline noise is likely to be influenced by vehicle traffic from the carriageway, adjacent agricultural activities and nearby rail track.

Biodiversity

The scheme falls within a coastal rural part of Renfrewshire, where the surrounding landscape predominately consists of rectilinear fields and farms, a plantation and the Clyde Estuary. The rail track separates the plantation from the carriageway.

A desktop study using Nature Scot's Sitelink online interactive map has identified the following designations found immediately north of the carriageway:

Inner Clyde – Site of Special Scientific Interest (SSSI), Special Protection Area (SPA) and Ramsar site - supporting wintering birds.

The scheme will fall within bat active season (April to September).

Amey's Invasive Non-native Species (INNS) Database notes the presence of Japanese knotweed *Fallopia japonica* and Himalayan balsam *Impatiens glandulifera* on the grass verge adjacent to the eastbound carriageway. The EB and WB verges are separated by approximately 20m of M8 carriageway.

Field Survey

A site survey was undertaken by the Environmental and Sustainability Team on the 2nd March 2021 to determine the requirement for protected species licencing, prior to construction, in accordance with the Wildlife and Countryside Act 1981, Nature Conservation (Scotland) Act 2010 (as amended), Wildlife and Natural Environment (Scotland) Act 2011 (as amended) and Protection of Badgers Act 1992.

The immediate surrounding consists of rectilinear fields and farms and the coastal waterbody. There are no significant or distinctive rock formations present upon approach to the waterbody which could attract otter.

A stream flows perpendicular to the carriageway. There were no distinctive features suitable for protected species such as badger and otter. No evidence of protected species activity was noted within the surveyed area.

Young trees flanked the carriageway, with an area of woodland present beyond the carriageway including the on/off slips. This area of woodland was surveyed with no protected species activity noted.

Land

The trunk road footprint consists of two westbound and eastbound lanes, separated by a central reservation, with a hard shoulder. On and off slip roads exists within the scheme extents.

On site work activities will be confined within the M8 carriageway boundary and will not require access over any private or community land.

The scheme does not fall within any areas designated for their landscape quality. The scheme falls within a coastal rural part of Renfrewshire. The Clyde Estuary is found immediately north and rectilinear fields and farms are found south of the carriageway. A plantation also exists south of the western extent.

Soil

The National Soil Map of Scotland identifies the local soils to consist of brown earths.

The scheme is not located within, or within proximity to, any Local Geodiversity Sites (formerly known as RIGS) or geologically designated SSSIs.

A desktop study using the British Geological Survey Map has identified local geology types as the following:

- Bedrock Geology: Strathgryfe Lava Member - Mugearite. Igneous Bedrock formed approximately 331 to 345 million years ago in the Carboniferous Period. Local environment previously dominated by eruptions of silica-poor magma.
- Superficial Deposits: Superficial Deposits - Sediment. Superficial deposits formed up to 3 million years ago in the Quaternary Period. Local environment previously dominated by no interpretation of the environment of deposition (U). 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).

Water

A desktop study using the Scottish Environmental Protection Agency (SEPA) Water Classification Map identifies Clyde Estuary immediately north of the M8 carriageway. SEPA has classified this waterbody with an overall status of moderate ecological potential, an ecology status of moderate and a chemical status of pass.

An unidentified stream flows below and perpendicular to the westbound carriageway.

Drainage is provided by the combined kerb-drainage system located in the kerb line of the hard shoulder and then is replaced by top entry gullies which continue to the end of the scheme. Drainage will likely outfall into the Clyde.

The Indicative River & Coastal Flood Map by SEPA identifies sections of the scheme to be in a location at medium risk of coastal water flooding from the Clyde Estuary.

Air

The scheme is found within a predominantly rural area.

Traffic count in 2019 accounted for 12,653 vehicles per day, with an average of 11.1% heavy goods vehicle.

The scheme location does not fall within any of Renfrewshire Council's declared Air Quality Management Areas.

Climate Change

The Climate Change (Scotland) Act sets out the target and vision set by the Scottish Government for tackling and responding to climate change. The Act includes a target of reducing CO2 emissions by 80% before 2050 (from the baseline year 1990).

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

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

Material Assets

Activity	Material Required	Origin/ Content
Site Construction	TS2010 Surface (bitumen and aggregate) Road Paint / studs AC32 / AC20 Binder and Base	A proportion of reclaimed asphalt pavement (RAP) is used in asphalt production. Typical RAP values for base and binder are 10% -15% with up to 10% in surface course. TS2010 Surface Course allows a wider array of aggregate sources to be considered when compared to typical stone mastic asphalt (SMA). As a result, the use of TS2010 should reduce the usage of imported aggregates and increase the use of a wider range of sustainable aggregate sources.

Waste

Activity	Waste Arising	Disposal/ Regulation
Site Construction	Road Planings	All recyclable waste will be recycled in line with guidance. 36 core samples were taken, none contained tar. Therefore, waste produced is not subjected to special waste treatment and disposal, and 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.

Cultural Heritage

A desktop study using PastMap does not identify any protected features of cultural heritage within proximity of the scheme location.

Vulnerability of the Project to Risks

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

Description of Main Environmental Impacts and Proposed Mitigation

Population and Human Health

Impacts

- Night-time working may disturb the nearby cottage due to the increase of noise and light.
- Crack and seat treatment is considered a noise heavy activity which utilises guillotines, dropped from height, to create fractures in the cementitious base.
- The Core Path will unlikely be affected during construction.
- Traffic management arrangements may increase travel time and increase congestion on local roads.
- TS2010 will afford benefits of a reduction in mid to high frequencies of traffic noise and a reduction in ground vibrations. As a result, ambient noise levels may decrease post construction.
- TS2010 will be utilised for resurfacing purposes, which is shown to have superior durability compared to standard road mixes.
- Reduced reoccurring routine maintenance and associated levels of disruption due to TS2010 durability.

Mitigation

- Residential properties within proximity of the works will be notified in advance of the works.
- The road closures/restrictions will be widely publicised within the local and wider area, in an effort to minimise disturbance to vehicular travellers.
- Even though it is unlikely for the Core Path to be impacted, an alternative path suitable for all members of the public will be established if there are any obstructions.
- Additional lights required will be directed at the area of work and pointed away from residential areas.
- Operatives will be briefed with the Noise and Vibrations briefing before starting construction.

It has been determined that the proposed project will have slight temporary impact to population and human health.

Biodiversity

Impacts

- There is potential for protected species to be active within the local surroundings, due to the long stretch of the coastal water.

- There are minimal lines of trees present within the scheme extents that could be used for bat foraging purposes. However, it is likely for bats to be active towards the western extents as it is more thickly vegetated.
- The works will not impact on any trees, as works will be restricted to the paved ground.
- These designated sites support non-breeding wintering birds and therefore impact is unlikely as construction activities will take place in July.
- It is unlikely for the works that the works will contribute to the spread of invasive plants.

Mitigation

- It is an offence to intentionally kill, injure or take (capture) a protected species; Operatives will be vigilant for potential presence of protected species. If a protected species is sighted within proximity to the works location, work will be temporarily suspended, until it has moved on. Any sightings will be reported to the Environmental and Sustainability team.
- On site light sources will be kept to a minimum, and only used as required. When in use, any artificial light should be pointed down and directed at the area of works as far as reasonably practicable, reducing any light spill into the wider surroundings including to nearby sensitive areas.
- Any excavations which are left open and unattended overnight (including manholes), will be benched or ramped to avoid entrapment and such excavations will be inspected each morning for the presence of trapped animals.
- The safe and secure storage of oil, fuels and other potential pollutants or poisonous materials will be adopted.

Consultation with Nature Scot was undertaken in February 2021 as the works fall within 2km of European and 300m of National designations. Nature Scot confirmed that adverse impact is not predicted, therefore the works do not require any form of consent.

The works have been scheduled for July, the important over-wintering bird populations which the Inner Clyde designations have been classified to protect – and particularly the internationally important migratory redshank population of the European Special Protection Area (SPA) - will not be present on the estuary at the time. As such there will be no Likely Significant Effect on the SPA.

If works are rescheduled within the wintering bird period (September to March), then further consultation with NatureScot is required.

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

Land

The works will be kept to the existing M8 carriageway boundary and will not require or prevent access to private or community land.

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

The M8 within the scheme extents does not fall within any designation for landscape quality or character.

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 landscape.

Soil

Excavation of soils is not required as part of the works.

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

Water

Impacts

- If not adequately controlled, debris and run off from the works could be suspended in the surface water, in the event of a flooding incident, this debris may be mobilised and could enter the road drainage having a detrimental effect on the surrounding local water environment;
- Potential for spills, leaks or seepage of fuels and oils associated with plant to escape and reach drainage systems and watercourses, if not controlled;
- Risk of flooding may impact the scheme extent delaying the works.

Mitigation

- Appropriate measures will be implemented onsite to prevent any potential pollution to the natural water (e.g. debris, dust, hazardous spills). Measures can include but not limited to:
  - Spill kits must always be present on site,
  - The use of funnels and drip trays when transferring fuel,
  - Use of dampening or tool extraction mechanisms to control dust,
  - The use of covers to act as seal around drains,
  - Any pollution incidents will be reported.
- 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 should temporarily stop, and only reconvene when deemed safe to do so, and run-off / drainage can be adequately controlled to prevent pollution.

- Oil, fuels and other potential pollutants or poisonous materials will be stored safely on site to prevent spillages;
- Best practice, as detailed by SEPA's 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.

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

Air

Impacts

- The use of vehicles and plants 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

Best practice measures will to be adopted for the duration of the scheme. Best practice measures will include but not be limited to:

- Vehicle and plant servicing/checks as per manufacturing and legal requirements;
- Adoption of drive green techniques;
- Route preparation and planning;
- When not in use plant and vehicle will be switched off.

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

Climate Change

Impacts

- Greenhouse gas emissions will be emitted through the use of machinery, vehicles and materials used (containing recycled and virgin materials).

Mitigation

- Where possible local suppliers will be used as far as practicable to reduce travel time and greenhouse gas emitted as part of the works;
- Vehicles / plant shall not be left on when not in use to minimise and prevent unnecessary emissions being emitted.
- Further actions and considerations for this scheme are detailed in section 8 Material Assets.

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

Material Assets and Waste

Impacts

- Contribution to resource depletion through use of virgin materials,
- Greenhouse gas emissions generated by material production and transporting to and from site,
- Special waste disposal may be required, if tar is present.

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.
- Road planings generated will be recovered by a licenced contractor for reuse and / or recycling in accordance with the criteria stipulated within SEPA document 'Guidance on the Production of Fully Recoverable Asphalt Road Planings'.
- The chosen material TS2010 Surface Course allows a wider array of aggregate sources to be considered when compared to typical stone mastic asphalt (SMA). As a result, the use of TS2010 should reduce the usage of imported aggregates and increase the use of a wider range of sustainable aggregate sources.
- Operatives will be briefed with the Basic Waste Rules briefing.

Circular Economy

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.

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.

Cultural Heritage

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

Assessments of the Environmental Effects

The following statutory organisations have been consulted:

- Renfrewshire Council's Environmental Health Team have been notified of the proposed works.
- Nature Scot regarding the Natura Sites.

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 March 2021.
- A field survey for protected species was undertaken by the Environmental and Sustainability Team at Amey on 2 March 2021.

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,

are not situated in whole or in part in a sensitive area within the meaning of regulation 2(1) of the Environmental Impact Assessment (Scotland) Regulations 1999.

The project has been subject to screening using the Annex III criteria to determine whether a formal Environmental Impact Assessment is required under the Roads (Scotland) ACT 1984 (as amended by The Roads (Scotland) Act 1984 (Environmental Impact Assessment) Regulations 2017). Screening using Annex III criteria, reference to consultations undertaken and review of available information has not identified the need for a statutory EIA.

The project will not have significant effects on the environment by virtue of factors such as:

Characteristics of the scheme:

- Construction activities are restricted to the 15,000m² / 1.5ha area of existing carriageway.
- Materials will be derived from recycled, secondary or re-used origin as far as practicable within the design specifications.
- The chosen material TS2010 Surface Course allows a wider array of aggregate sources to be considered when compared to typical SMA.
- Road planings will be fully recycled in accordance with Guidance on the Production for Fully Recovered Asphalt Road Planings.
- The design option (replacing the defective surfacing) conveys sustainability benefits by significantly reducing the quantity of maintenance interventions required at the location over approximately 20 years.

Location of the scheme:

- The scheme will be confined within the existing carriageway boundaries and as a result will not require any land take and will not alter any local land uses.
- The scheme is not situated in whole or in part in a “sensitive areas” as listed under regulation 2 (1) of the Environmental Impact Assessment (Scotland) Regulations 1999 (as amended).

Characteristics of potential impacts of the scheme:

- As the works will be limited to the like-for-like replacement of the carriageway pavement there is no change to the vulnerability of the road to the risk or severity of major accidents / disasters that would impact on the environment.
- No significant residual impacts are predicted. Disruption due to construction activities are not expected to be significant and will be mitigated as far as is reasonably practicable.

- The successful completion of the scheme will afford benefits to road users.
- 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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