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Record of Determination

M8 Junction 13 to Baird Street Westbound

Contents

Project Details

Description

This scheme is required to replace the existing surface course of this section of the M8 westbound carriageway which is showing signs of fretting and crazing. There is the possibility that deeper treatment will be required as well as bridge joint replacement on four underbridges within the scheme extents. There additional works are to be confirmed.

Works will involve carriageway surface reconstruction utilising TS2010. Exact treatment depths have yet to be confirmed. Construction activities will include:

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

If bridge joint replacements take place they will also include:

- Road Saw & Pneumatic Hammer (breaking out of existing joint);
- Compressed air (cleaning deck);
- Hot lance (dry deck); and,
- Mixing drum (mix expansion joint material).

The Environment and Sustainability (E&S) team contacted Glasgow City Council (16/09/2021) to alert them to these night works, please see appendix 1.

These works are programmed to take place in February 2022 however no set dates have been confirmed. All works will be carried out through the night.

Traffic Management (TM) for this scheme is yet to be confirmed but will likely involve lane closure.

Location

The scheme is located on an urban section of the M8 carriageway to the north of Dennistoun, Glasgow City. The National Grid Reference are:

- Scheme start - NS 62429 66311

- Scheme end - NS 59997 66181

Figure 1 – Scheme Extents

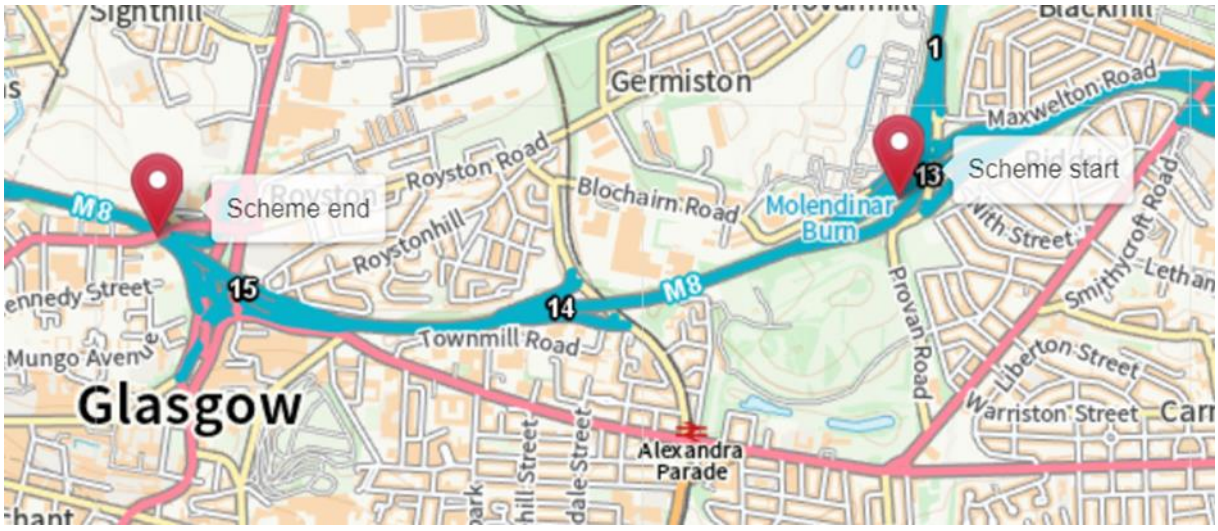

Figure 2 – Scheme Location

Description of Local Environment.

Population and Human Health

The Annual Average Daily Flow (AADF) of traffic on this section of the carriageway in 2020 was 109,714 with 5,911 of these being Heavy goods Vehicles.

There are no Core Paths, footpaths, bridleways or cycleways within the scheme extents due to the fact the road is a motorway.

There are some residential properties in close proximity to the scheme, the closest being approximately 30m south of the scheme on Duntroon Street.

The Glasgow Royal infirmary sits approximately 60m south of the scheme towards the scheme end.

There are several junctions within the scheme extents that lead to the further road network.

TM for the scheme is yet to be decided but will likely involve lane closures.

The scheme does not fall withing a Candidate Noise Management Area (CNMA).

Biodiversity

SiteLink has not identified any designated sites within 2km of the scheme.

Amey's Roadkill database (2000-2021) has not identified any records of roadkill within the scheme extents.

Amey's INNS database has identified records of Japanese knotweed, Giant hogweed and Rhododendron on the roadside verge at various points adjacent to the scheme extents.

The scheme falls within Glasgow City Council's Water Vole Trigger zone. This means that it is likely that there will be water voles active in the area.

The National Biodiversity Network has identified protected species Soprano Pipistrille *Pipistrellus pygmeaus* within 2km of the scheme.

Field Survey

A field survey is not required for this scheme due to the urban nature of the surrounding area being unfavourable for protected species shelter. NatureScot confirmed that as the works will be restricted to the existing carriageway footprint, there is no requirement for a Water Vole survey.

Consultation

NatureScot were contacted (16/09/2021) to discuss potential for Water Vole burrow surveys. They confirmed that provided the mitigation detailed in this report was followed strictly, there would be no requirement for surveys nor a licence.

Land

The scheme will take place on the westbound carriageway. A mixture of residential and industrial urban areas flank the scheme, Alexandra Golf Course sits adjacent to the scheme start.

Soil

Scotland's Soils map does not hold any record of soil type in this location.

The scheme does not fall within an area designation for Geological Conservation Review according to SiteLink.

Water

The Scottish Environment Protection Agency (SEPA) has highlighted a risk of surface water flooding on areas within this section of the M8 carriageway.

There are no watercourses within close proximity of the scheme in accordance with SEPA's Water Classification map.

Air

The scheme does not fall within an Air Quality Management Area (AQMA) declared by Glasgow City Council.

The primary source of background pollution in this location is road traffic from the M8.

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

Scotland is working to reduce emissions of all major greenhouse gases by at least 75% by 2030, with the aim of reaching net zero by 2045**.**

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

Table 1 – Site Construction Materials

Key Materials Required for Activities		
Activity	**Material Required**	**Origin/ Content**
Site construction	• Road paint/studs • TS2010 Road surfacing • Binder • Metal bridge joints	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. Metal should contain a proportion of recycled material.

Waste

Table 2 – Site waste materials

Key Waste Arising from Activities		
Activity	**Waste Arising**	**Disposal/Regulation**
Site Construction	• Road planings • Road paint/studs	Uncontaminated road planings generated as a result of the required works, will be fully recycled in accordance with the criteria stipulated within SEPA document 'Guidance on the Production of Fully Recoverable Asphalt Road Planings. As testing has not identified any coal tar within the scheme extents, 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'. All materials that can be should be reused throughout the network in conjunction with appropriate legislation.

Cultural Heritage

There are no features of cultural heritage within close proximity to the scheme according to PastMaps.

Description of Main Environmental Impacts and Proposed Mitigation

Population and Human Health

Impacts

- There is potential for minimal disturbance to residential properties.
- Noise from works have the potential to impact Glasgow Royal Infirmary.
- Access to on/off slips may be temporarily blocked by the works.
- Road users journey time may increase as a result of TM.

Design Mitigation and Regulatory Requirements

The E&S team contacted Glasgow City Council (16/09/2021) to alert them to these night works.

Site Specific Control Measures

- A letter drop will be delivered to residential properties highlighted on the notification map. This will detail work times and activities.
- Glasgow Royal Infirmary will also be notified of the works.
- No engines will be left idling when not in use.
- All plant/machinery must be fitted with silencers/mufflers.
- Appropriate signage will be put in place detailing TM before it begins.
- The Noise and Vibration briefing will be delivered to all site operatives.

Provided that mitigation measures and best practice are followed the residual impact is deemed neutral.

Biodiversity

Impacts

- Works are unlikely to impact or be impacted by INNS as works will be restricted to the carriageway and no materials, plant or site operatives will be on the roadside verges.
- As works will be limited to the like-for-like replacement of the existing carriageway, with all personnel, plant and equipment stored on the verge, no impact is predicted to water vole burrows within the verges.
- Artificial lighting will not disturb nocturnal species as there is permanent roadside lighting in place.

Design Mitigation

Works should be designed in such a way there is no impact to road verges and minimal impact to the carriageway lane closest to the verge.

Site Specific Control Measures

- Site operatives must be briefed on the location of the INNS.
- If INNS is identified on site, works should not be undertaken within areas of growth.
- The known location of INNS will require to be cordoned off with a physical barrier (taping off will suffice).
- No vehicles or plant or personnel are permitted to enter the verge and must instead be operated from the carriageway.
- No materials, machinery, plant or vehicles can be placed on the roadside verge.
- Any artificial lighting should be pointed directly at the scheme at all times.

Provided that mitigation measures and best practice is followed the residual impact is deemed negligible.

Land

It has been determined that the proposed project will not have direct or indirect effects to the land around the scheme as works will be restricted strictly to the existing carriageway footprint.

Soil

The scheme will be restricted to the existing carriageway footprint and no plant, vehicles, materials or site personnel will be allowed on the roadside verges therefore there will be no impact and it has been scoped out.

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 fuel/chemical spillages through the use of various plant and vehicles, which may adversely impact the water environmental.

Site Specific Control Measures

- Appropriate measures, as detailed in the Guidance for Pollution Prevention (GPP) 1 and 5 issued by NetRegs, will be implemented to prevent pollution to the natural water environment (e.g. debris, dust sand and hazardous substances) via entering nearby drains.
- Visual pollution inspections of the working area must be conducted in frequency, especially during heavy rainfall and wind.
- Debris and dust generated as a result of the works must be prevented from entering the drainage system. This can be via the use of drain covers or similar.
- Weather reports will be monitored prior to and during the works with all construction activities temporarily halting in the event of adverse weather/flooding event. The works must only continue when it is deemed safe to do so and run-off/drainage can be adequately controlled to prevent pollution.

Provided mitigation is followed the residual impact of works on the water environment is deemed neutral.

Air

Impacts

These works will not impact the long-term local air quality in the local area.

- The use of vehicles, plants 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.
- The diversion route is likely to increase traffic levels and associated emissions within local road networks.

Site Specific Control Measures

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 vehicle 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.

The works are of a temporary nature and will not result in any permanent local changes to air quality levels.

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.

- Further actions and considerations for this scheme are detailed in Material Assets (Table 1).

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

Material Assets

Impacts

- Contribution to resource depletion through use of virgin materials,
- Greenhouse gas emissions generated by material production and transporting to and from site.

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.
- The chosen material 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 should reduce the usage of imported aggregates and increase the use of a wider range of sustainable aggregate sources.

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.

Waste

Impacts

- Transportation and recovery of planings will require energy deriving from fossil fuel,
- Limited quantity of waste from sweeping will arise requiring disposal.

Mitigation

- 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’.
- Road sweeping waste will be treated at a licenced facility to separate useful materials such as stone/aggregate as far as reasonably practicable, recovering this waste and diverting it from landfill.

Cultural Heritage

There are no features of cultural heritage to be impacted on this site.

Vulnerability of the Project to Risks

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

Cumulative Effects

There are no other schemes being carried out in the same area at the same time which may have a cumulative effect on the local environment.

Assessments of the Environmental Effects

The Environment and Sustainability team contacted Glasgow City Council (16/09/2021) to alert them to these night works.

Provided that mitigation measures and best practice are followed the residual impact is deemed neutral.

NatureScot confirmed there would be no need for licensing requirements for water voles and that all mitigation was suitable on the 16th September 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 34,169m^2 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 works, or related work equipment/plant will be within the verge. No impact is predicted to surrounding water vole burrows within the verges.
- 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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