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CÒMHDHAIL ALBA

Environmental Impact Assessment Record o M4 Annfield Culvert to Brocketsbrae NB & M74 Bog Road to Jct 11 SB

Contents

Project Details

Description

The works are being undertaken as part of the South West (SW) Network Management Contract (NMC). Three separate areas (schemes) located long the M74 carriageway are to be resurfaced due to the defects within the carriageway surface. The carriageway is presenting signs of continual deterioration with signs of crazing, cracking, potholes and fretting throughout each scheme extents. The total surface area of all three schemes is estimated to be approximately 45,000m^2.

Construction activities for these schemes will entail the resurfacing of the following areas:

- M74 at three back-to-back locations from Junction 11 to Annfield Culvert NB (including Junction 11 on-slip),
- M74 Annfield Culvert to Brocketsbrae northbound (NB) and
- M74 Bog Road to Junction 11 southbound (SB).

These schemes are located to the east and southeast of Lesmahagow, South Lanarkshire. The construction activities for the scheme at each location are as follows:

- Installation of Traffic Management (TM);
- Milling of carriageway to agreed depths;
- Resurfacing of the carriageway to existing road levels (using TS2010 surface course, AC20 bituminous binder and AC32 bituminous base);
- Reinstatement of road markings, linings and studs; and
- Removal of TM.

The following plant/machinery/vehicles may be used throughout the schemes:

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

The schemes entitled M74 Junction 11 to Annfield Culvert (including Junction 11 on-slip) and M74 Annfield Culvert to Brocketsbrae NB are to be undertaken on the 1st December 2024, with works anticipated to last for approximately 20 days with night-time working.

The M74 Bog Road to Jct. 11 SB scheme is set to be undertaken in January 2025 (exact date to be confirmed) over a duration of four days (including nights).

TM for the schemes will entail alternating overnight closures and contraflow systems, tying in with the TM currently in situ for the M74 11-10 90 Nethan Viaduct Waterproofing and Parapet Replacement scheme.

Location

The schemes are located within a semi-rural section of the M74 carriageway east and southeast of Lesmahagow, South Lanarkshire at the approximate National Grid References (NGRs) detailed below.

M74 Jct. 11 to Annfield Culvert NB (including Jct. 11 On-Slip)

- Scheme start: NS 84632 34816
- Scheme end: NS 83737 37028

M74 Annfield Culvert to Brocketsbrae NB

- Scheme start: NS 83532 37458
- Scheme end: NS 81918 40200

M74 Bog Road to Jct. 11 SB

- Scheme start: NS 82897 38721
- Scheme end NS 83655 37186

The scheme locations are illustrated in *Figure 1: Scheme Locations* below.

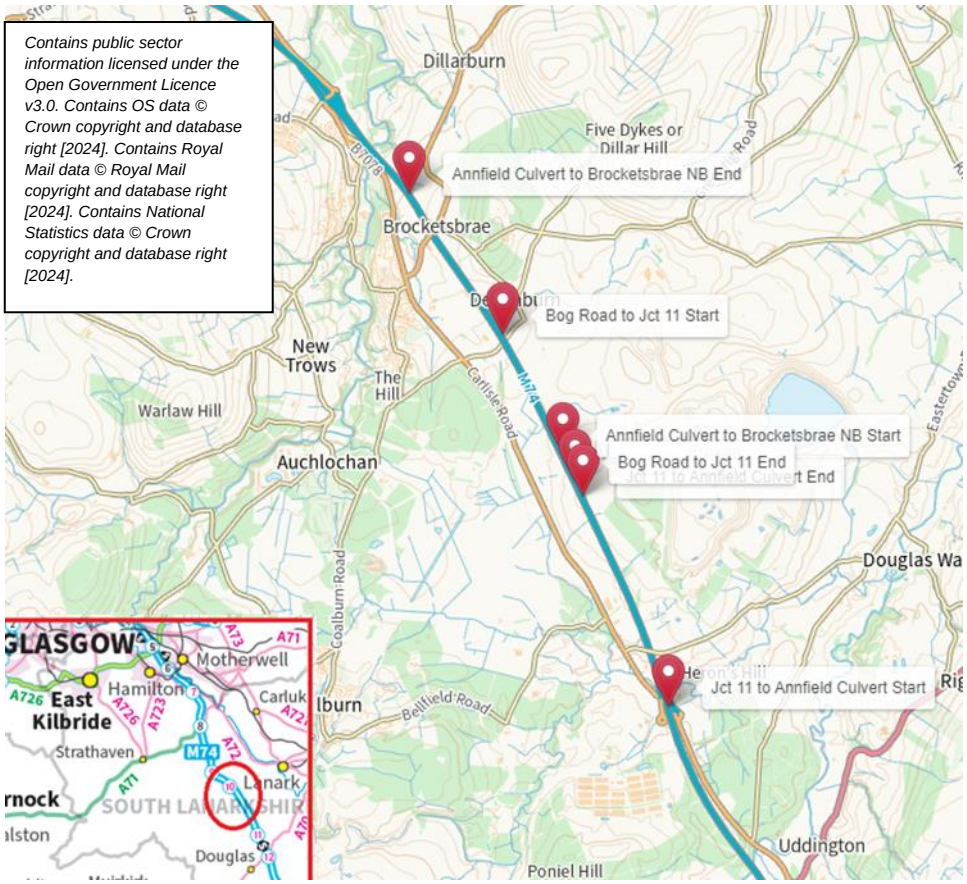

Figure 1: The location of all three schemes within southwest Scotland.

Description of local environment

Air quality

The Annual Average Daily Flow (AADF) in 2023 for the M74 carriageway within the scheme extents (for all schemes) (estimated count point: 80204), accounted for 36,110 vehicles, with 9,185 of these being Heavy Goods Vehicles (HGVs).

Approximately 32 residential properties have been identified within 200m of the M74 Annfield Culvert to Brocketsbrae NB scheme extents.

Within 200m of the M74 Bog Road to Jct. 11 SB scheme extents there are two properties and four within 200m of the M74 Jct. 11 to Annfield Culvert (including Jct. 11 On-Slip) scheme. The closest property has been identified approx. 60m west of the M74 Jct. 11 to Annfield Culvert (including Jct. 11 On-Slip) scheme extents. No non-residential air quality sensitive receptors have been identified within 200m of each of the scheme extents.

Baseline air quality surrounding the scheme extents is likely to be influenced by traffic flow along the M74 trunk road.

South Lanarkshire Council has not declared any Air Quality Management Areas (AQMAs) within 200m of any of the scheme extents.

The Scottish Pollutant Release Inventory (SPRI) has not identified any polluting facilities/activities within 1km of any of the scheme extents.

Cultural heritage

The PastMap resource has identified multiple non-designated (within 200m of the schemes) culturally significant assets within proximity to any of the scheme extents. No designated culturally significant assets were identified within 300m of any of the scheme extents. Table 1 (below) lists the non-designated assets identified within 200m of all scheme extents.

Name and Designation	Reference Number	Description	Distance from Scheme
Craighead Historic Environment Record (HER)	10295	Farmstead	200m north of M74 Annfield Culvert to Brocketsbrae NB
Eastwood HER	10113	Cist	90m west of M74 Annfield Culvert to Brocketsbrae NB

Name and Designation	Reference Number	Description	Distance from Scheme
Eastwood HER	76177	Farmhouse	60m west of M74 Annfield Culvert to Brocketsbrae NB
Lesmahagow Station HER	76160	Railway Station (19th Century – 20th Century)	160m east of M74 Annfield Culvert to Brocketsbrae NB
Auchren HER	69867	Farmstead	120m west of M74 Bog Road to Jct. 11 SB
Auchren Lime Works HER	69866	Lime Works	150m west of M74 Bog Road to Jct. 11 SB
Archaeological Desk-Based Assessment: Coalburn Hspi	6867	Archaeological Event Record	200m west of M74 Bog Road to Jct. 11 SB
Archaeological Assessment: Amochrie Primary School, Renfrewshire HER	1114	Archaeological Event Record	40m east of all schemes **of** M74 Bog Road to Jct. 11 SB and M74 Jct. 11 to Annfield Culvert (including Jct. 11 On-Slip)
Archaeological Excavation: Braehead Park, Renfrewshire HER	1113	Archaeological Event Record	130m east M74 Bog Road to Jct. 11 SB and M74 Jct. 11 to Annfield Culvert (including Jct. 11 On-Slip)
Archaeological Evaluation: Birkhill, Coalburn, South Lanarkshire HER	3840, 3749	Archaeological Event Record	20m west (closest) M74 Bog Road to Jct. 11 SB and M74 Jct. 11 to Annfield Culvert (including Jct. 11 On-Slip)
Birkhill HER	57808	Pit	160m west of M74 Jct. 11 to Annfield Culvert (including Jct. 11 On-Slip)
Archaeological Evaluation: Lands At Birkhill, East of B7078, Lesmahagow, South Lanarkshire HER	1234	Archaeological Event Record	120m west of M74 Jct. 11 to Annfield Culvert (including Jct. 11 On-Slip)
Cairnhouses HER	41254	Structure	Within scheme extents of M74 Jct. 11 to Annfield Culvert (including Jct. 11 On-Slip)
Nether Fauldhouse HER	41255	Building	50m east of M74 Jct. 11 to Annfield Culvert (including Jct. 11 On-Slip)
Archaeological Evaluation: Poniel South, South Lanarkshire HER	5441	Archaeological Event Record	200m south of M74 Jct. 11 to Annfield Culvert (including Jct. 11 On-Slip)

Landscape and visual effects

Approximately 10 residential properties have been identified as having sight of the M74 Annfield Culvert to Brocketsbrae NB scheme (located on Devonburn Road and Bog Road) whilst approx. three properties are thought to have sight of the M74 Jct. 11 to Annfield Culvert (including Jct. 11 On-Slip) scheme (at Nether Fauldhouse). No properties are thought to have a clear line of sight to the M74 Bog Road to Jct. 11 SB scheme.

No landscape designations such as Garden Designed Landscapes (GDLs) or National Scenic Areas (NSAs) have been identified within 1km of each of the scheme extents (PastMap).

Scotland's Landscape Character Type Map lists the landscape character type present within all scheme extents to be 'Plateau Farmland – Glasgow and Clyde Valley'. Scotland's Historic Land-Use Map lists the land surrounding all scheme extents as a mixture of rough grazing, plantation, industrial and commercial areas, managed woodland and rectilinear farms and fields.

Scotland's Ancient Woodland Inventory (AWI) has not identified any ancient woodland within 500m of the schemes. No Tree Preservation Orders (TPOs) have been identified adjacent within 500m of any of the scheme extents.

Biodiversity

The M74 carriageway contains areas of low-lying vegetation, trees and scrub separating the carriageway from arable and pastoral farmland.

The Coalburn Moss Special Area of Conservation (SAC) (site ID: 8225) has been identified approximately 500m west of each of the scheme extents. This site is designated for active raised bogs and degraded raised bogs.

Due to the potential for likely significant effects on this designated European site, a Habitats Regulations Appraisal (HRA) has been undertaken for the schemes.

No other nationally designated sites (such as SSSIs) or local/national nature reserves) have been identified within 200m of any of the scheme extents (NatureScot's Sitelink).

The NBN Atlas resource has identified the presence of Japanese knotweed within 500m of the M74 Jct. 11 to Annfield Culvert (including Jct. 11 On-Slip) scheme. This

record is out with the carriageway boundary. The Amey south west INNS Map resource has not recorded the presence of any INNS within 500m of each of the scheme extents. This resource has identified the presence of Transport Scotland Target Species including Common ragwort *(Jacobaea vulgaris)*, Creeping thistle *(Cirsium arvense)* and Rosebay willowherb *(Chamaenerion angustifolium)* throughout each of the scheme extents.

It is considered unlikely that any terrestrial mammal species of conservation importance are associated with permanent habitat or resting places within the area of likely construction disturbance. In addition, the schemes are contained within the carriageway boundary involving like-for-like works within already engineered layers and as such a field survey has been ruled out, and a desktop study has been deemed sufficient for this assessment.

Geology and soils

The schemes are not located within 200m of any Geological Conservation Review sites (GCRs) or SSSIs designated for their geological significance (NatureScot's Sitelink).

The National Soil Map of Scotland lists the soil present within all scheme extents to be that of brown earth other than a small area to the south of Devonburn of which is peat (contained within the M74 Annfield Culvert to Brocketsbrae NB and M74 Bog Road to Jct. 11 SB schemes).

A mix of the following Bedrock Geology have been identified within the scheme extents at all three scheme locations:

- Swanshaw Sandstone Formation - Sandstone. Sedimentary bedrock formed between 427.4 and 393.3 million years ago during the Silurian and Devonian periods.
- Lower Limestone Formation - Sedimentary rock cycles, Clackmannan group type. Sedimentary bedrock formed between 330.9 and 328 million years ago during the Carboniferous period.
- Upper Limestone Formation - Sedimentary rock cycles, Clackmannan group type. Sedimentary bedrock formed between 329 and 324 million years ago during the Carboniferous period.

A mix of the following Superficial Deposits have been identified within the scheme extents at all three scheme locations:

- Till, Devensian - Diamicton. Sedimentary superficial deposit formed between 116 and 11.8 thousand years ago 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 and Glaciofluvial Deposits - Gravel, sand and silt. Sedimentary superficial deposit formed between 2.588 million years ago and the present during the Quaternary period.
- Passage Formation - Sedimentary rock cycles, Clackmannan group type. Sedimentary bedrock formed between 328 and 318 million years ago during the Carboniferous period.
- Peat - Peat. Sedimentary superficial deposit formed between 2.588 million years ago and the present during the Quaternary period.

As a result of the works taking place strictly within made ground within the M74 carriageway boundary, it has been determined that the 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

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

- Bituminous surfacing (TS2010, AC20 binder and AC32 base);
- Road marking materials (thermoplastic road marking paint) and studs;
- Vehicle fuel;
- Oil; and
- Lubricant.

Wastes are anticipated to be planings from the carriageway surface course, with no coal tar recorded from coring logs within any of the scheme extents. The Contractor is responsible for the disposal of 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.

Each scheme value is in excess of £350k and therefore a Site Waste Management Plan (SWMP) will be produced.

Noise and vibration

Baseline noise levels are likely to be influenced by vehicle traffic from the M74 carriageway and residential/industrial activities. The AADF in 2023 for the M74

carriageway within each of the scheme extents (estimated count point: 80204), accounted for 36,110 vehicles, with 9,185 of these being HGVs.

Approximately 49 residential properties have been identified within 300m of the M74 Annfield Culvert to Brocketsbrae NB scheme extents, four within 300m of the M74 Bog Road to Jct. 11 SB scheme extents and 11 within 300m of the M74 Jct. 11 to Annfield Culvert (including Jct. 11 On-Slip) scheme extents. The closest property has been identified approx. 60m west of the M74 Jct. 11 to Annfield Culvert (including Jct. 11 On-Slip) scheme. No non-residential noise sensitive receptors have been identified within 300m of each of the scheme extents.

Scotland's Noise Map has indicated modelled day-evening-night noise levels (Lden) to be between 65-85dB within 100m of each schemes throughout their extents. The schemes are not located within Candidate Noise Management Area (CNMA), as defined by the Transportation Noise Action Plan (Road Maps) Transportation Noise Action Plan (TNAP).

Population and human health

The M74 carriageway within each of the scheme extents is located within the semi-rural area of Lesmahagow, South Lanarkshire. This settlement (and other settlements including Abington and Lanark) contain community facilities including medical practices and educational facilities, with a greater abundance and complexity of these facilities found within the city of Glasgow which lies to the north.

Approximately 49 residential properties have been identified within 300m of the M74 Annfield Culvert to Brocketsbrae NB scheme extents, four within 300m of the M74 Bog Road to Jct. 11 SB scheme extents and 11 within 300m of the M74 Jct. 11 to Annfield Culvert (including Jct. 11 On-Slip) scheme extents. The closest property has been identified approx. 60m west of the M74 Jct. 11 to Annfield Culvert (including Jct. 11 On-Slip) scheme. Other land uses within 300m include agricultural properties/holdings and various industrial and commercial premises. Agricultural fields are present adjacent to the M74 carriageway within all the scheme extents.

The M74 carriageway within each of the scheme extents is not street-lit, contains no pedestrian footways, no access points/roads (other than the Jct. 11 On-Slip), no crossover points, no bus stops and no laybys. The Jct. 11 On-Slip of which is to be resurfaced as part of the scheme contains a footway and cycle path at its mid-point on Carlisle Road.

South Lanarkshire Council Core Paths have been identified within 300m of the scheme extents including CL/3290/1 (traversing the M74 Annfield Culvert to Brocketsbrae NB scheme) and CL/5201/1 (traversing both M74 Annfield Culvert to

Brocketsbrae NB scheme and the M74 Bog Road to Jct. 11 SB scheme) of which traverse the scheme extents via overbridges. Core Paths CL/5149/1 and CL/5965/2 (and their various off-shoots) run parallel to each scheme extents with the closest point approx. 20m east of the M74 carriageway. National Cycle Network (NCN) route 74 runs parallel to the scheme extents, aligning with the carriageway at the extreme southern extent of the scheme (Jct. 11 On-Slip).

Road drainage and the water environment

SEPA's Water Classification Hub has identified the Poniel Water (site ID: 10097) flowing beneath the M74 carriageway at the southern extent of the M74 Jct. 11 to Annfield Culvert (including Jct. 11 On-Slip) scheme. This watercourse is classified under the Water Framework Directive (WFD) as being in 'Moderate' condition. The Nethan Water has also been identified approx. 400m west of the M74 Annfield Culvert to Brocketsbrae NB scheme at its northern extent (classified as being in 'Good' condition under the WFD). Various unnamed, unclassified field drains and have been identified adjacent to and flowing beneath the M74 carriageway within each of the scheme extents including the Galrig Burn, the Gad Burn and the Fauldhouse Burn.

SEPAs Water Classification Hub identified the groundwater conditions within the M74 Annfield Culvert to Brocketsbrae NB scheme extents (entitled Lesmahagow, site ID: 150673) as being in 'Good' condition. The groundwater conditions within the southern area of works including the M74 Jct. 11 to Annfield Culvert NB (including Jct. 11 On-Slip) scheme and the M74 Bog Road to Jct. 11 SB scheme (entitled Douglas Coalfield North, site ID: 1505454) were identified as being in 'Poor' condition.

SEPA's Flood Map has indicated that a minor section of the M74 carriageway (adjacent to Brocketsbrae) at the schemes northern extent is at a 'High' (approx. 10% each year) risk of surface water flooding. Areas beneath the M74 carriageway where watercourses and field drains are present are at a 'High' (approx. 10% each year) risk of river water flooding.

The M74 carriageway within each of the scheme extents is drained via verge-side filter drainage.

The M74 carriageway within each of the scheme extents is not contained within a Nitrate Vulnerable Zone (NVZ) as defined by the Scottish Government.

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 (GHGs) 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

- On site construction activities carry a potential to produce airborne particulate matter, dust and generate emissions that may have a temporary impact on local air quality levels and act as a nuisance to nearby residents.
- TM being implemented during the schemes may result in an increase in associated vehicle emissions through idling vehicles and increased congestion.

Mitigation

- Best practice and measures as outlined in the 'Guidance on the assessment of dust from demolition and construction (January 2024)' published by the Institute of Air Quality Management (IAQM), which includes the following mitigation relevant to these schemes, will be followed:
    - The 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;
    - Materials that have a potential to produce dust will be removed from site as soon as possible, unless being re-used on site (cover or fence stockpiles will be used to prevent wind whipping);
    - Cutting, grinding or sawing equipment will be fitted or used in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems;
    - Drop heights from conveyors and other loading or handling equipment will be minimised;
    - Vehicles carrying wastes and materials entering and leaving the work area will be covered to prevent escape of materials during transport;
    - Equipment will be readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods; and
    - When not in use, plant, vehicles and NRMMs will be switched off and there will be no idling vehicles.
- 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.

- Green driving techniques will be adopted, and effective route preparation and planning will be undertaken prior to works.
- Where possible, materials will be sourced locally.
- Surfaces will be swept where loose material remains following planing.

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

Cultural heritage

Impacts

- Due to the containment of the schemes within the M74 carriageway extents, no impacts on cultural heritage have been identified as a result of the works. It is likely that the original construction of the M74 carriageway removed any archaeological features present and therefore the potential for new archaeological discoveries is very low.

Mitigation

- Should the nature of the works change, or additional excavation works be required, the Amey ET&S team will be contacted prior to works commencing.
- Works and storage of plant/machinery/vehicles will be contained within the carriageway boundary at all times throughout the schemes.
- Noise and Vibration Mitigation measures can be found within the relevant section of this document.

With mitigation measures in place, no significant effects are predicted on cultural heritage. Therefore, in accordance with DMRB Guidance document LA 106: Cultural Heritage, no further assessment is required.

Landscape and visual effects

Impacts

- Residential properties within proximity to each of the scheme extents will have sight of the works which will temporarily impact the tranquillity of the area. Site lighting during night-time hours has the potential to impact nearby visual receptors.
- No operational impacts will be had for visual receptors as works entail the like-for-like resurfacing of the M74 carriageway within all of the scheme extents.

Mitigation

- Spill kits will be available on site and all operatives fully trained in spill response.
- Plant and machinery will be regularly maintained in order to reduce the risk of leaks of oil and fuel.
- Works will be contained within the M74 carriageway extents.
- Site lighting will be directional and will be pointed away from nearby visual receptors.
- Asset installation will be in keeping with the current setting of the M74 carriageway within each of the scheme extents.

The residual effect on landscape and visual effects is deemed to be neutral. Therefore, in accordance with DMRB Guidance document LA 107: Landscape and Visual Effects no further assessment is required.

Biodiversity

Impacts

- During night-time programming, misdirected site lighting and additional noise could cause temporary disturbance to any surrounding nocturnal species.
- There is potential for protected species to be active within the surrounding area and for the works to result in disturbance to these species.
- Unmitigated works have the potential to cause the spread of Transport Scotland target species including Common ragwort, Rosebay willowherb and Creeping thistle and INNS (Japanese knotweed).
- There is potential for the Coalburn Moss SAC to be impacted by the schemes.

Mitigation

- As part of the Network Management Contract, Amey, on behalf of transport Scotland, have been asked to keep a record of various target species, including Common ragwort, Rosebay willowherb and Creeping thistle. Works will not cause the spread of these species as no works are taking place out with the carriageway boundary. If works are likely to result in the spread of these species through disturbance, the appropriate Amey landscaping team will be consulted.
- In the event that protected species are sighted, works will temporarily be suspended until the animal has moved on. Any sightings will be reported to the Amey ET&S team. The ET&S team will be contacted for any guidance if required, and the control room will be contacted for environmental record.

- All works and storage of plant, machinery, vehicles and equipment will be restricted to the boundaries of the carriageway. No works will be undertaken within the verge.
- All site lighting will be directed away from sensitive ecological receptors such as woodland and watercourses.
- Noise mitigation measures as outlined in the Noise and Vibration section and pollution control mitigations as outlined in the Road Drainage and the Water Environment section will be adhered to during the works.
- An HRA has been undertaken to assess the impacts of the schemes upon the Coalburn Moss SAC. This appraisal has concluded that no Likely Significant Effects are likely as a result of these works due to their proximity/connectivity to the sites. Whilst the construction works could result in some indirect and localised noise, water and air pollution, qualifying species are highly unlikely to be present within each scheme location as it is considered sufficiently separated from the qualifying habitats of the European Site.

With mitigation measures in place, no significant effects are predicted on biodiversity. Therefore, in accordance with DMRB Guidance document LA 108: Biodiversity, no further assessment is required.

Material assets and waste

Impacts

- The design life for the TS2010 surfacing proposed is estimated to be 20 years. This will reduce the requirement for maintenance to this section of road over the period.
- The works will result in contribution to resource depletion through use of virgin materials.
- GHG emissions will be generated by material production and transportation 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 and associated emissions.
- It is Amey policy to reuse or recycle as much waste material as possible. Where reuse is not feasible, waste material will be removed to a licenced waste facility.
- Where possible, different waste streams will be separated at the source.

- Waste will be stored in suitable containers and covered.
- A SWMP will be completed for the each of the schemes.
- Following on-site coring investigations and testing, no coal-tar was identified within the surfacing of the carriageway within each of the scheme extents. As such, road planings generated as a result of the works will be recovered in accordance with the criteria stipulated within SEPA document 'Guidance on the Production of Fully Recoverable Asphalt Road Planings' where possible.

With best practice mitigation measures in place, no significant effects are predicted on Material Assets and Waste. Therefore, in accordance with DMRB Guidance document LA 110: Material Assets and Waste, no further assessment is required.

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 local amenity users will benefit from improved road surfacing as a result of the schemes.
- Noise heavy works will likely be required during night-time hours, which could cause disturbance for nearby sensitive receptors (such as residential properties within 300m).

Mitigation

- The noisiest works will be completed before 23:00 where feasible.
- Plant/machinery will be fitted with silencers/mufflers.
- No plant, vehicles or machinery will be left idling when not in use.
- The use of a soft start to the works, whereby plant/machinery is turned on sequentially as opposed to simultaneously.
- Amey's environmental briefing on noise and vibration will be delivered to operatives prior to the start of construction.
- Amey's ET&S team has contacted South Lanarkshire Council's Environmental Health Team to notify of the works due to night-time programming.

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 and no further assessment is required.

Population and human health

Impacts

- Construction site lighting during night-time hours could cause disturbance for residential properties in close proximity, and for the nearby amenity users.
- TM for the works will involve a contraflow system and closures. Nearby residents of surrounding settlements may experience travel disruption due to presence of TM, which may lead to increased journey times.
- There will be no impact on land take from private land, community facilities or agricultural land as a result of the schemes as all works will be contained within the carriageway boundary.
- Footways and NCN 74 may be impacted by the M74 Jct. 11 to Annfield Culvert (including Jct. 11 On-Slip) scheme via potential closures when works are nearby.
- Core paths are unlikely to be impacted by the M74 Jct. 11 to Annfield Culvert (including Jct. 11 On-Slip) scheme due to their general distance from the scheme extents, and the requirement of the works to be contained within the carriageway boundary.

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.
- When in place, TM will be monitored to ensure it is effectively managing traffic flow.
- Temporary site lighting used throughout the schemes will be directional and pointed only at the area of works.
- Site specific control measures regarding noise and vibration, landscape and visual effects and air quality can be found in the relevant sections (above).
- Due to night-time programming, properties within 300m of each of the scheme extents will be notified in advance of the works.
- Footways and cycleways will remain open throughout the scheme on the Jct.11 On-Slip. Where closures are required, alternative routes will be discussed with the local authority and/or statutory body(s) and advertised accordingly.

With best practice mitigation measures in place, no significant effects on 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 runoff from the works could enter the surrounding surface water environment. In the event of a flooding incident, this debris may be mobilised and could enter the road drainage system, thus having a detrimental effect on the water environment.
- Potential for spills, leaks or seepage of fuels and oils associated with plant to escape and reach drainage systems and watercourses if not controlled, which may negatively affect the surrounding water environment.
- Should flooding occur, this may delay the scheduled works.
- There is the potential for watercourses within proximity to and flowing beneath the scheme extents to be impacted by the schemes.

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 both during and following the works.
- Debris and dust generated as a result of the works will be prevented from entering the drainage system. This will be via the use of drain covers or similar.
- Appropriate measures will be implemented onsite to prevent any potential pollution to the natural water environment (e.g., debris, dust, and hazardous substances). This will include spill kits being present onsite at all times, and the use of funnels and drip trays when transferring fuel etc. The Amey control room will be contacted if any pollution incidences occur (24 hours, 7 days a week).
- Visual pollution inspections of the working area will be conducted frequently, especially during heavy rainfall and wind.
- Weather reports will 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.
- All storage of materials/fuel and any refuelling activities will be more than 10m away from any drainage inlet at all times and placed on a hardstanding surface.
- Storage areas will be located away from areas that see high vehicular movement to prevent accidental damage.
- All oils and fuels will be returned to storage area after use.
- Amey's environmental briefing on water pollution prevention will be delivered to operatives prior to the start of construction.

Providing all works operate in accordance with current best practice, as demonstrated by SEPA's Guidance for Pollution Prevention (GPPs), no significant

effects are predicted on the water environment. Therefore, 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 distance 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 the schemes 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 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.

Assessment cumulative effects

The Scottish Road Works Commissioner's Interactive Map has highlighted the M74 11-10 90 Nethan Viaduct Waterproofing and Parapet Replacement scheme (23-SW-1201-27) beginning on 3 October 2024 and estimated to last approx. 124 working days within the same location as the schemes. These works are programmed to tie in with these schemes to minimise cumulative impact. This will include utilising the same TM, combining/considering working patterns and shift arrangements and the sharing/communication of environmental risks and impacts.

South Lanarkshire Council's Planning Portal has not highlighted any planning applications of note within each of the scheme extents at the time of the works in question.

Amey's current programme of works has not highlighted any other works on the M74 (other than scheme 23-SW-1201-27) that will be undertaken in conjunction with the schemes.

No other nearby schemes which may result in a combined effect on nearby receptors have been identified.

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.

Assessments of the environmental effects

Following assessment as detailed within this Record of Determination, and provided that mitigation measures are in place and best practice is followed, the residual impact is deemed neutral and there will be no significant effects on the environment.

The following environmental surveys/reviews/consultations have been undertaken:

- An Environmental Scoping Assessment for the schemes, undertaken by the Amey ET&S Team in October 2024.
- Habitats Regulations Appraisals for the schemes, undertaken by the Amey ET&S Team in October 2024.
- Consultation with South Lanarkshire Council's Environmental Health team, undertaken by the Amey ET&S Team in October 2024.

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 schemes:</u>

- 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.
- The risk of major accidents or disasters is considered to be low.
- 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.
- By removing the carriageway defects this will provide this part of the M74 carriageway with another life cycle, and significantly improve the ride quality, which will result in safer conditions, and positive operational impacts for road users.

Location of the schemes:

- Works are not located within an area designated for its specific landscape character or quality.
- The schemes are not situated in whole or in part in a sensitive area.
- The schemes will be confined within the existing carriageway boundary and as a result will not require any land take or alter any local land uses or habitats.
- Any impacts to the local landscape during the construction phase will be minor, temporary and not considered significant. In addition, no operational adverse impacts are anticipated.

Characteristics of potential impacts of the schemes:

- Containment measures of the working area will be in place to prevent debris or pollutants from entering the surrounding environment.
- Any potential impacts of the works are expected to be temporary, non-significant, and limited to the construction phase.
- Measures will be in place to ensure appropriate removal and disposal of waste.
- Combination effects have been identified with regard to another scheme in the area and impacts will be limited as works have been programmed to tie in with this scheme.

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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