

ENVIRONMENTAL IMPACT ASSESSMENT SCREENING (DETERMINATION)

Step 1: Consideration of Annex I and II screening thresholds

Name of Project

Location (including national grid reference)

M6 Junction 21A to 26 Smart Motorway All Lane Running	The southern end of the Proposed Scheme, at Junction (J) 21A, is located approximately (national grid reference (NGR) SJ631922) to the northern end of the Proposed Scheme, at J26, NGR SD538044.
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Description of development

<p>The Proposed Scheme is 16.4km long and extends from the Croft Interchange at J21A (Chainage 39600), where it meets the M62, to the Orrell Interchange at J26 (Chainage 56000), at the eastern terminus of the M58. The Proposed Scheme is to upgrade the M6 to a Smart Motorway (SM) – All Lane Running (SM-ALR) which permanently converts the existing hard shoulder into an extra running lane.</p> <p>The Proposed Scheme size is approximately 300 hectares within the existing Highways Boundary including slip roads and mainline carriageway. 0.6 hectares of land at Martinscroft is purchased by agreement as essential air quality mitigation.</p>
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Anticipated consenting route

Planning Act 2008 <input type="checkbox"/>	Highways Act 1980 <input checked="" type="checkbox"/>	Other (please specify e.g. TCPA) <input type="checkbox"/>
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Annex I thresholds

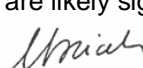
Planning Act 2008 and Highways Act 1980			Other (please specify)
Construction of a motorway or an express road. <input type="checkbox"/>	Construction of a new ≥ 4 lane road of ≥ 10 km in length (e.g. dual carriageway). <input type="checkbox"/>	Realignment/widening of an existing ≤ 2 lane road to provide ≥ 4 lanes of ≥ 10 km length (e.g. single carriageway road to dual carriageway or larger). <input type="checkbox"/>	(insert threshold(s)) <input type="checkbox"/>

Note: If an Annex I threshold is identified move to sign off procedure. Otherwise proceed to Annex II thresholds

Annex II thresholds

Planning Act 2008	Highways Act 1980			Other (please specify)
All roads <input type="checkbox"/>	Construction or improvement project not included in Annex I above and occupying >1 ha. <input checked="" type="checkbox"/>	Project located (in whole or in part) in a 'sensitive area.' <input type="checkbox"/>	In the view of a Competent Expert, there are other impacts which may result in significant effects. <input type="checkbox"/>	(insert threshold(s)) <input type="checkbox"/>

Sign off procedure

<p>Given the information included above, I support the conclusion that (HE Project Manager to tick as appropriate):</p> <p><input type="checkbox"/> Environmental Impact Assessment is mandatory for the named project, on the basis that it meets the relevant thresholds within Annex I of Directive 2014/52/EU (amending Directive 2011/92/EU) and any specific requirements of the relevant EIA Regulations (Step 2 not required).</p> <p><input type="checkbox"/> Environmental Impact Assessment is not mandatory for the named project, on the basis that it does not fall within the relevant thresholds of Annex I or II of Directive 2014/52/EU (amending Directive 2011/92/EU) or any specific requirements of the relevant EIA Regulations (Step 2 not required).</p> <p><input checked="" type="checkbox"/> The named project falls within the relevant thresholds of Annex II of Directive 2014/52/EU (amending Directive 2011/92/EU) and any specific requirements of the relevant EIA Regulations and therefore screening against the Annex III criteria is required to determine if there are likely significant effects (Step 2 required).</p>
<p>Signature Highways England Project Manager: </p> <p>Date: 24/09/2020</p>

EIA Screening (Determination) Audit

This Environmental Impact Assessment screening (determination) is saved in the following location in SHARE:

<http://share/share/livelink.exe?func=ll&objId=86926137&objAction=browse&viewType=1>

Note: HE project manager to complete audit tool in this link

Step 2: Annex III screening of Annex II projects

A. Characteristics of the project

The Proposed Scheme size is approximately 300 hectares, including slip roads and mainline carriageway. Smart motorways are a technology driven approach to improving the capacity and operational efficiency of existing motorways. On the M6 J21a-26 SM scheme, the existing three-lane carriageway with hard-shoulder is to be upgraded to four-lanes by conversion of the hard-shoulder into a permanent running lane. New and upgraded signage will be provided along the motorway to provide road users with relevant information including speed limits. Physical design elements include:

- 66 overhead gantries (portal and cantilever, including 44 new gantries, one retained gantries and 21 gantries where existing foundations would be reused) fitted with Advanced Motorway Indicators (AMIs), new Message Signs and/ or Advanced Directional Signs (ADS), strategic signs (MS3/ MS4-L) and Variable Messaging Signs (MS4). These will display variable speed limits based on traffic conditions;
- Removal of 14 existing gantries;
- Ten emergency areas (EAs), four on the northbound carriageway and six on the southbound carriageway. They will be constructed to provide a safe area for vehicles to stop in an emergency without interrupting the flow of traffic. Emergency roadside telephones (ERTs) will be installed at EAs;
- New vehicle restraint systems (VRS) at specific locations of new infrastructure such as gantries;
- Cameras and loop detectors will provide information to support the technology, where through junction running (TJR) will be introduced;
- Provision of 40 sets of Remotely Operated Temporary Traffic Management Signs (ROTTMS) each set consists of five signs (1 mile, 800, 600, 400 and 200 yards);
- Provision of 35 new pan tilt zoom (PTZ) CCTV cameras will be installed on 15m or 10m masts to provide 100% coverage of the carriageway;
- Provision of 57 Motorway Incident Detection and Automatic Signalling (MIDAS) radar at regular centres throughout the Proposed Scheme;
- Eight Highways Agency Digital Enforcement Camera System 3 (HADECS3) enforcement sites including four dummy sites;
- Hardening of the central reserve and installation of a reinforced concrete barrier (RCB);
- Resurface using low noise surfacing material of the hard shoulder where it becomes a running lane (lane 1) and also lane 4;
- New environmental barrier located on the southbound carriageway on the top of cutting between Chainages 48700 to 49260 at Ashton-in-Makerfield;
- Installation of vortex separators at eight locations;
- Existing lighting will be removed and replaced with modern light-emitting diode (LED) lighting;
- Provision of approximately 300mm wide hard strip with enhanced edge drainage. Drainage assets located within the new Lane 1 will be relocated where possible. New drains are also required in some sections of the verges to accommodate new roadside features;
- Modifications of white line layouts at existing junctions to enable four lane operation (both carriageways); and

The majority of works are within the existing highway boundary. Clearance work to facilitate construction will include removal of redundant motorway infrastructure such as cabinets, gantries, signs and localised vegetation clearance.

Three residential properties at Moss Brow Cottages, Nicol Avenue, Martinscroft are being purchased by agreement as essential air quality mitigation. The land holding associated with the three properties will become part of the Proposed Scheme. The scheme includes demolition of these three properties.

B. Location of the project

The Proposed Scheme location is shown on Figure 1 Scheme Location Plan and the scheme footprint can be viewed on drawing no HE549339-ACM-VES-M6-SW-ZZ-ZZ-DR-LE-0477 (Scheme Overview). The Proposed Scheme runs from M6 J21A Croft Interchange, where it meets the M62, to the Orrell Interchange at J26, at the eastern terminus of the M58. The southern end of the Proposed Scheme, at J21A, is located approximately 5km north east of Warrington town centre (NGR SJ631922). The northern end of the Proposed Scheme, at J26, is located approximately 4.5km west of Wigan Town Centre (NGR SD538044). The local landscape is defined by arable and permanent pasture fields bounded by hedgerows with deciduous woodland blocks. The existing highway vegetation comprises largely even-aged densely spaced broadleaved trees and shrubs that are likely to have been planted following the construction of this section of the network, and which have subsequently colonised broader areas of the soft verge. Urban areas in proximity to the scheme include Wigan Town Centre in the north east and Warrington in the west.

Environmentally sensitive areas include –

- Ecological sites (within 2km of the Proposed Scheme) include Raven Brickworks Site of Special Scientific Interest (SSSI), Highfield Moss SSSI, Greenslate Water Meadows Local Nature Reserve (LNR), Three Sisters LNR, The Wigan Flashes LNR, Bryn Marsh and Ince Moss SSSI, Manchester Moss Special Area of

Conservation (SAC)/Risley Moss SSSI and LNR and Woolston Eyes SSSI.

Ecologically designated sites within the wider cumulative affected road network (ARN) study area (distance from proposed M6 main scheme works (3.9km), Stanley Bank Meadow SSSI (3.4km), Midland Meres and Mosses Phase 2 Ramsar/ Oakhanger Moss SSSI (39km), Woolston Eyes SSSI (3km), Red Scar and Tun Brook Woods SSSI (26km) and Red Moss SSSI (26km). Heritage assets located within the 500m study area include two Scheduled Monuments (St Oswald's Well and Castle Hill motte and bailey and bowl barrow), two Grade II* listed buildings (Myddleton Hall and Winstanley Hall), eight Grade II listed building (St Oswalds Well, Stocks at Windy Arbour, Woodhead Farmhouse and Barn at Woodhead Farm, Old Mill Farmhouse and Barn, Myddleton Hall Farmhouse, Dean School Cottage, Home Farmhouse and Milestone 1392445, Fearnhead Lane) and Willow Park Conservation Area. **Other statutory and non-statutory environmental designations include –**

- Eight non-statutory designated local ecological sites adjacent to the Proposed Scheme: Fox Covert, including Cowhey Dam Local Wildlife Site (LWS), Wicken Hedge LWS, Haydock Cross LWS, Kilbruck Lane Grassland LWS, Willow Park LWS, Rixton Moss LWS, Woolston Moss LWS, Skitters Wood Site of Biological Importance (SBI) and Moss Wood SBI.
- Within the M6 J21A to J26 study area there are seven Air Quality Management Areas (AQMAs): Chester Road AQMA, Congleton AQMA No.6 (Sandbach), Greater Manchester AQMA, Newton High Street AQMA (No.2), M6 AQMA (No.1), Warrington AQMA No.1 and Warrington AQMA No.4 - all declared for exceedances of the annual mean nitrogen dioxide (NO₂).
- There are 20 noise important areas (NIAs) within 1km, with two located on the Proposed Scheme (NIA ID numbers: NIA 8191 and 8195).
- The study area includes fifteen rivers within the North West River Basin Management Plan area, contained within the Douglas and Lower Mersey watercourse management catchments. All watercourses have either a moderate or good status for ecological and chemical classifications for Water Framework Directive objectives. No major works have been identified within 8m of a watercourse. The Proposed Scheme is underlain by a Principal Aquifer between J21a to J24. There is one groundwater source protection zone between J1a to J24. The assessment has concluded there are no significant effects on groundwater.
- There are areas designated as flood zone 2 and 3 that are crossed by the Proposed Scheme.

C. Type and characteristics of potential impacts

Air Quality: there are no significant adverse effects predicted. During construction, dust resulting in a short duration and localised deterioration of local air quality adjacent to works areas, would be managed through a Construction Environment Management Plan (CEMP) which will outline measures that will be implemented to reduce potential air quality impacts (for example, dust suppression). The assessment of operational effects in the opening year indicates that the proposed scheme, based on cumulative traffic forecasts, is not significant for air quality using Highways England long term trends (LTT_{E6}) projection rates. The scheme is not significant for air quality because three residential properties at Nicol Avenue, Martinscroft, predicted to experience large changes in air quality at concentrations above the NO₂ objective value, are being purchased by agreement as essential air quality mitigation. With mitigation, there are some adverse changes in air quality at other residential locations but these are not significant overall. This includes locations with the scheme above the air quality objective with a medium worsening of NO₂ (>2 to 4µg/m³) at seven receptors, small worsening (>0.4 to 2µg/m³) at 12 receptors, and small improvements (>0.4 to 2µg/m³) at one receptor.

Ecology and Nature Conservation: there are no significant adverse effects predicted. No significant adverse effects are predicted to designated sites, notable habitats or notable species. No greater than a slight adverse effect is predicted to any ecological receptor during the construction or operation of the Proposed Scheme. Slight adverse effects as a result of the Proposed Scheme are listed below (all other effects are neutral):

- A total of approximately 4.4ha of permanent habitat loss with an additional area of 14.4ha of temporary loss due to vegetation clearance during construction is predicted based on worst case assumptions;
- Priority woodland, semi-improved neutral grassland and hedgerows during construction, prior to mitigation;
- LWSs including Houghton Green Pool during construction due to temporary disturbance of species; and
- Great crested newts during construction and operation due to temporary and permanent loss of habitats.

Seeding and planting in areas where clearance is required will be designed to enhance the floristic and structural diversity of the habitats lost during construction. A CEMP, incorporating any requirement for European Protected Species Licences will mitigate any impact on protected species.

Cultural Heritage: there are no significant adverse effects predicted. The construction phase would result in impacts of minor adverse magnitude, with effects of slight adverse significance on the Motte and Bailey Castle Scheduled Monument. There would also be a negligible magnitude, with effects of neutral on Willow Park Conservation Area. The operation phase would not result in any further impacts on cultural heritage.

Landscape and Visual Effects: no significant adverse effects have been predicted on the landscape character, or local/ nationally significant landscapes or visual receptors. During construction there would be temporary impacts on landscape character and visual receptors due to vegetation clearance at works areas – vegetation removed only where essential for construction, sight lines and safety requirements. All construction phase effects are localised, non-significant, short-term and reversible. Adherence to a CEMP will reduce and mitigate these temporary adverse impacts. The majority of visual effects during construction will be in the order of slight adverse, with one location of

moderate adverse (Viewpoint PSVR17), but this is not considered to be significant due to the temporary nature of the impact and existing appreciation of the motorway. Predicted operational impacts on residential properties and public rights of way, in year 1, no greater than a slight adverse visual effect with mitigation undertaken where required, in year 15, no greater than a slight adverse visual effect predicted. Vegetation will be retained where possible and any screening planting lost for construction will be replaced and reinstate its function once matured. Predicted effects on landscape are slight adverse during construction on four local character areas (LCA)(LCA 2A, LCA WFE1, LCA WFE2 and LCA 1C), this reduces to effects of neutral significance during operation year 1 and 15 due to replacement planting maturing and mostly closing introduced gaps created during construction.

Noise and Vibration: no significant adverse noise and vibration effects are predicted. During construction there would be temporary adverse noise and vibration impacts, location specific and/or along traffic diversion routes – with control of noise and vibration outlined in a CEMP. There are 702 noise sensitive receptors within 158m of proposed retaining walls. Retaining wall construction potentially requires piling which could result in noise levels in excess of the SOAEL during the night-time period. Construction vibration from night-time piling is predicted to result in short-term adverse impacts at up to 134 residential properties. To avoid significant adverse effects due to piling activities, alternative quieter methods of piling such as rotary bored piling or hydraulic ‘press-in’ piling, will be implemented where ground conditions permit. Where this is not viable, alternative mitigation measures will be used, such as the use of temporary site hoardings or piling shrouds, in addition to ensuring the duration of any piling works will not exceed the temporal thresholds detailed in the CEMP. During operation lane 1 and 4 will be paved with low noise road surfacing and one new noise barrier will be installed on the southbound carriageway at Ashton-on-Mersey. Four residential properties will be provided with noise insulation. Two of these properties are located to the east, and two to the west of the Proposed Scheme, where it passes over the A572 in Newton-le-Willows. The scheme will enhance the noise environment and supports an overall net beneficial effect which is demonstrated by the opening year and design year predictions. Note: the assessment is considered to be conservative, due to affected road links, the study area is extended around J21A, where the M6 meets the M62, and to the north of this junction.

Road Drainage and the Water Environment: no significant adverse effects to surface water, groundwater and flood risk predicted. During construction, a neutral effect is predicted for surface water and groundwater resources. All scheme construction will take place within the management of a CEMP. During operation, the provision of additional impermeable area will not increase the discharge rate to the watercourses. The operational Proposed Scheme results in an increase in traffic of greater than 20% in some links of the traffic model. As a result of the Highways Agency Water Risk Assessment Tool (HAWRAT) assessment Hydrodynamic Vortex Separators (HVSs) will be installed on 6 networks (3, 4, 5, 6, 7 and 8). In accordance with Priority Outfalls Interim Guidance, the proposed installation of HVSs within the soft estate is considered to be delivering treatment, without adverse effect on other environmental resources. Therefore, the conclusion of no significant effects from the Proposed Scheme can be reached. Overall neutral effect.

Cumulative effects: an assessment of cumulative effects has been undertaken regarding intra-project cumulative effects (where impacts caused by the Proposed Scheme by multiple topics are considered) and also inter-project cumulative effects (caused by a combination of the Proposed Scheme with other relevant schemes). No significant adverse effects are anticipated.

Conclusion: the Proposed Scheme is classified as an Annex II project under the EIA Directive 2014/52/EU, meaning that a statutory EIA is not mandatory. However, as the Proposed Scheme is over the trigger threshold of one hectare, further environmental review has been undertaken and reported in the EAR. As no significant effects have been identified by the EAR process, a statutory EIA is not required for this Proposed Scheme.

Sufficiency of evidence and limitations

- The evidence used to support this screening determination includes the M6 J21a to J26 Smart Motorways Environmental Assessment Report (EAR) (HE549339-ACM-GEN-M6-SW-ZZ-ZZ-RP-LE-0001) and the M6 J21a to 26 SM: Habitats Regulation Assessment (HRA) (HE549339-ACM-EBD-M6-SW_ZZ_ZZ-RP-LE-0001).
- Limitations of the assessment have been identified within the EAR and supporting documents. Where survey information has not been obtained or is incomplete within the EAR, such as ecology surveys, a precautionary approach has been adopted using professional judgement, guidance and best practice to determine effects and therefore it is considered that there will be no worsening of significance of effect ratings determined within the EAR. Where further surveys are carried out in future the outcomes of the assessment will be recorded through the Evaluation of Change Register during PCF Stage 5.

Project Manager Sign off procedure


Given the information included in Step 2, I support the conclusion that (*Project Manager to tick as appropriate*):

- Environmental Impact Assessment **is** required for the named Annex II project, on the basis that likely significant effects have been identified using the Annex III criteria in Directive 2014/52/EU (amending Directive 2011/92/EU)
- Environmental Impact Assessment **is not** required for the named Annex II project, on the basis that likely significant effects have not been identified using the Annex III criteria in Directive 2014/52/EU (amending Directive 2011/92/EU).

On this basis (*Project Manager to tick as appropriate*):

- (For Highways Act 1980 projects) I hereby request a determination for the named project.
 (For Planning Act 2008 projects and those falling under other consenting regimes) I hereby request confirmation of agreement with the screening conclusion for the named project.

Signature Highways England Project Manager:



Date: 24/09/2020

NOTE: HE Project Manager to update the **audit tool** and seek the necessary technical approval sign off.

Technical approval sign off procedure

Given the information included above, in accordance with the requirements of the Directive 2014/52/EU (amending Directive 2011/92/EU) I have reached the following conclusion: (*Highways England Nominee to complete applicable section*)

There is sufficient uncertainty or an absence of evidence to support the conclusions that the project team has reached, and, on that basis, I refer this back to the project team.

Environmental Impact Assessment **is** required for the named project due to the following:

- There are topic(s) where the project team have predicted likely significant effects.
 Sufficient evidence has been provided by the project team to support the conclusion.

Environmental Impact Assessment **is not** required for the named project due to the following:

- There are no topics where the project team have predicted likely significant effects.
 Sufficient evidence has been provided by the project team to support the conclusion.

Signature Strategic Highways Company Nominee:

(*insert*) Ivan Le Fevre (*signed electronically*)

Date:

(*insert*) 5th October 2020