ENVIRONMENTAL IMPACT ASSESSMENT SCREENING (DETERMINATION)

Step 1: Consideration of Annex I and II screening thresholds

Name of Project	Location (including national grid reference)
M27 junction 4 to 11 Smart Motorway	*Junction 4 at the interchange with the M3, north Southampton (NGR SU 4017 5172) to junction 11 connecting with the A27 north of Fareham (NGR SU 5906 6496).*

Description of development

The M27 Smart Motorway scheme ("the proposed scheme") is an improvement scheme, which would upgrade the existing M27 between junctions 4 to 11 to a smart motorway, with active traffic management (ATM) techniques to increase capacity using of variable speed limits and by the permanent conversion of the existing hardshoulder into an extra lane. The proposed scheme is approximately 156ha in area and 23.5km long (including slip roads and mainline between junction 4 and junction 11). A Location Plan is provided in Appendix A

Anticipated consenting route

Planning Act 2008 ☐	Highways Act 1980 ☒	Other *(please specify e.g TCPA)* ☐

Annex I thresholds

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

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 ☐	Construction or improvement project not included in Annex I above and occupying >1ha. ☒	Project located (in whole or in part) in a 'sensitive area.' ☐	In the view of a Competent Expert, there are other impacts which may result in significant effects. ☐	*(insert threshold(s))* ☐

Sign off procedure

Given the information included above, I support the conclusion that (*HE Project Manager to tick as appropriate*):

☐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**).

☐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**).

☒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**).

[redacted] Date: 25/09/2018

Date: *11/09/18*

EIA Screening (Determination) Audit

This Environmental Impact Assessment screening (determination) is saved in the following location in SHARE:
http://share/share/llisapi.dll?func=ll&objaction=overview&objid=50346168

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 comprises the hardening of the central reserve, installation of a rigid concrete barrier and conversion of the M27 between M27 junctions 4 to 11 to Smart Motorway All Lanes Running (ALR). This would be achieved by installing 23 new gantries fitted with Advanced Motorway Indicators (AMIs), 34 Advanced Directional Signs (ADS) and 44 Variable Messaging Signs (MS4). The gantries would be approximately 9m at the highest point, with MS4s placed on the face of the gantry rather than on top, or 12m where ADS would extend above the gantry top. AMIs would be mounted onto the face of the gantry and would not protrude above the gantry top. Thirteen new Emergency Refuge Areas (ERAs) and 9 safe refuge areas would be provided. These would be 4.6m wide and extend for a length of 100m.

The above elements of the proposed scheme were screened into the assessment due to the potential for likely significant effects on noise, biodiversity, landscape character, visual intrusion and heritage, water quality and flood risk, human health, and cumulative effects during construction and operation and the potential for likely significant effects on air quality during operation only. The assessment of cumulative effects included the adjacent M3 Smart Motorway ALR scheme.

Throughout the scheme, all works will be carried out within the existing highways boundary, with no physical work outside of the highways boundary or within the Natura 2000 sites. All surface water runoff during construction will be routed through the existing highways drainage system. The drainage system would accommodate predicted increases in flows due to greater impermeable surface areas and climate change, such that no increase in run-off rates would arise. The proposed scheme would take 2 years to construct, including commissioning. The proposed scheme would cover an area of around 156ha and is approximately 23.5km long (including slip roads and mainline between junction 4 and junction 11).

B. Location of the project

The proposed scheme is located on the M27 Motorway between junctions 4 and 11, to the north of Southampton and Portsmouth in the county of Hampshire (see Location Plan in Appendix A). The motorway passes through a mix of urban development areas and open countryside. Residential areas in Basset, Hatch Bottom, West End, Hedge End, Bursledon, Swanwick, Park Gate / Segensworth, Hills Coppice and Fareham / Wallington along with isolated properties.

There are five Air Quality Management Areas (AQMAs) within the Affected Route Network (ARN): Bitterne Road West (Southampton), A335 (Eastleigh), M3 (Eastleigh), Portland St (Fareham) and Gosport Road (Fareham).

Ten European Sites have been identified within the study area; including 3 SACs designated for bats within the 30km (Mottisfont Bats SAC, Briddlesford Copses SAC, and Singleton and Cocking Tunnels SAC); Solent & Dorset Coast pSPA, Solent & Southampton Water SPA and Ramsar, and the Portsmouth Harbour SPA and Ramsar within 2km; River Itchen SAC and Solent Maritime SAC within 2km and hydrologically connected. Three SSSIs are located within 2km, with a further 7 SSSIs located within the ARN. Twenty-eight non-statutory locally designated sites, Sites of Importance for Nature Conservation (SINCs), lie directly adjacent to the proposed scheme within the Zone of Influence (ZoI).

Habitats suitable for supporting protected species have been identified within the soft estate, including for badgers, great crested newt (GCN), bats, hazel dormouse and nesting birds. Twelve Ancient Woodland sites are located between junctions 10 and 11.

There are 2 conservation areas (Itchen Valley and Romill Close), Burlesdon Brickworks South Section Grade II Listed Building and the Grade II Listed Church of St Francis in Funtley, within 1km. The Itchen and Manor Farm Country Parks, on the banks of the River Itchen and Hamble respectively, are also both located within 1km.*

The proposed scheme is located within the East Hampshire, Test and Itchen catchment areas within the south-east River Basin District and crosses five main rivers including Monks Brook, River Itchen and its tributaries, River Hamble, River Meon and River Wallington, which are of good or moderate status. Four Priority A outfalls discharge to Monks Brook at junction 5, 2 Priority B outfalls discharge to the River Hamble and 1 Priority B outfall discharges to the west of junction 9. 27 other Not Determined culverts associated with mapped fluvial and surface water flood extents are crossed by the proposed scheme. One groundwater abstraction point is located north of junction 7. A detention pond that acts as a soakaway is located within the groundwater Source Protection Zone 2 (SPZ2) associated with the Portsdown Chalk Formation (a Principal Aquifer) lies between junctions 10 and 11. The proposed scheme traverses Flood Zones 2 and 3.

C. Type and characteristics of potential impacts

The proposed scheme and the cumulative scenario are unlikely to result in any significant air quality effects. In the Scheme opening year, without the proposed scheme, modelled concentrations would be below the air quality objective for annual mean NO_2 concentrations at 72 out of the 74 modelled receptors. The 2 receptors would experience a reduction in NO_2 concentrations with the Scheme, due to decreases in traffic along nearby routes, but

would continue to exceed the threshold. There would be no new exceedences or worsening of existing exceedences with the proposed scheme. In the opening year, small beneficial impacts would occur within the Bitterne Road West AQMA, including where exceedences of the air quality objective exist (R21, R24). Impacts on all other AQMAs would be 'imperceptible'. There are 4 PCM Links in the study area for which the EU limit value for annual mean NO_2 would be exceeded in the opening year without the proposed scheme in operation. The impact of the proposed scheme on these links would be imperceptible and there would be a low risk of non-compliance with the EU Directive on ambient air quality. The impact at designated ecological sites is considered to be not significant. No significant adverse effects are expected during construction, with the implementation of standard best practice measures included within the Construction Environmental Management Plan (CEMP).

No significant adverse noise effects would occur during operation due to the inclusion of 1 new acoustic barrier within the proposed scheme design. Adverse noise effects during construction would also be mitigated by specific measures within the CEMP, including limiting the duration of the works in particular locations, and committing to daytime working as opposed to night time working.

No significant effects are anticipated on any sites designated for nature conservation or the favourable conservation status of notable and legally protected species or habitats (including ancient woodland), during construction or operation. The construction works would cause temporary loss of habitats within the soft estate, which would have temporary effects on resource availability for notable species, and in the permanent loss of small areas of habitat. The following areas would be lost: 0.19ha woodland, 0.71ha scrub, 1.37ha grassland, <0.01ha bare ground and <0.01ha waterbody. With the inclusion of mitigation measures described in the Outline Environmental Management Plan (OEMP), such as appropriate timing of site clearance and enabling works, this habitat loss is not considered to result in significant effects on the favourable conservation status of notable or protected species. Further surveys for bats, badgers and GCN would be carried out, if required, to ensure no significant adverse effects would occur and to inform the CEMP and protected species licence applications, if required for construction. In the absence of the additional survey information, it is considered that the conclusions of the screening are still robust, as although the current results indicate presence of protected and notable species, the proposed scheme could be delivered within the highways estate and the proposed mitigation measures would ensure no significant adverse effects.

No significant effects are anticipated on the local or wider landscape character during the construction and operation of the proposed scheme. There would be some non-significant adverse visual effects on individual receptors during construction and continuing in the operational phase, but these effects would reduce by Year 15 once mitigation planting matures, by which time the general landscape character and function of the highway verges would be reinstated and would contribute to the wider landscape fabric. Therefore overall, the visual effects of the proposed scheme are not considered to be significant.

There would be no significant effects on the setting of cultural heritage assets, including listed buildings and conservation areas, due to construction and operation of the proposed scheme. This is because the assets' setting is restricted to their immediate surroundings, which already include the M27. There would be no direct effect on cultural heritage assets, as works would be confined to the highways estate, where the ground is already disturbed and assets, if present, would have been destroyed during the construction of the M27.

During construction the works will be contained within the highway boundary, with no physical work outside of the highway boundary and all surface water run-off during the construction work will be contained and managed within the existing highways drainage system. Any works required to the drainage system as part of the Scheme would be carried out offline and connected to the outfalls when work is complete, which will ensure no adverse effects on water during construction. Pollution control measures as required under the Water Resources Act 1991 will be implemented through the CEMP There would be negligible changes to surface water run-off during operation, as there would not be more than a 20% change in traffic flows that could affect water quality, and increased run-off rates due to additional areas of hardstanding would be managed through the proposed scheme's drainage design. Although a number of gantries and ERAs would be located in areas at fluvial and surface water flood risk, no notable change is expected on the existing flood flow conveyance or increase flood risk to adjacent receptors due to these structures. The proposed scheme would therefore not pose a notable increase in flood risk to people and property elsewhere. The assessment of runoff risk to groundwater identified a high risk to groundwater from an attenuation pond infiltrating to ground within the groundwater Source Protection Zone 2 to the west of junction 11, and as mitigation the need for additional treatment or spill containment will be considered.

No significant adverse residual combined effects are expected during construction or operation on any of the individual or group of sensitive receptors identified. The assessment of likely significant cumulative effects considered the effects of the proposed scheme with other nearby schemes, as defined by the traffic model, including the M3 Smart Motorway Programme junction 9 to 14. The construction compounds, for which consent would be sought separately under the Town and Country Planning Act, were also considered within the cumulative effects assessment, which concluded that no significant adverse residual cumulative effects are expected during construction or operation.

No significant effects are anticipated on population and human health, as adverse effects during construction due to air quality changes and disruption to routine maintenance activities would be mitigated during the construction stage, via the CEMP. There are also no significant effects anticipated on land and soil, as works would be confined to the highways estate, with the exception of the temporary construction compounds which would be reinstated after the

completion of construction.

No significant effects are anticipated on climate, as the proposed scheme would not give rise to a significant effect that are sufficient to cause climate changes at a national scale and the drainage design would accommodate changes in rainfall intensity due to climate change.

No significant effects are anticipated on materials, as the proposed scheme would use temporary material storage areas within or very close to the highways estate that are subject to separate planning permission, and all material supplies would originate from sites with planning consent and be delivered primarily via the strategic road network.

Sufficiency of evidence and limitations

An Environmental Scoping Report (MP0169) was produced for the proposed scheme in July 2016, followed by an Environmental Assessment Report (HES49344-MMSJV-EGN-00-RP-LX-00010) in March 2018. A Habitats Regulations Assessment (HRA) screening assessment was finalised in September 2018, the conclusion of which were agreed by Natural England. There has also been consultation with key external stakeholders such as the Environment Agency and local authorities in order to obtain data to inform the environmental assessment.

Further surveys for bats, badgers and GCN would be carried out, to inform the CEMP and protected species licence applications, if required. However, it is considered that the conclusions of the screening are still robust and there is sufficient certainty in the absence of survey data/design information, which would be collected at a later stage. Although the current results indicate presence of protected and notable species, it is considered that the scheme could be delivered within the highways estate and that the proposed mitigation measures would ensure no significant adverse effects.

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.

[redacted] Date: 25/09/2018

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.

[redacted] Date: *(insert)* 7-11-18.