

A47 Wansford to Sutton Dualling

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**9.36 ENVIRONMENTAL STATEMENT
ADDENDUM TWO**

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1. Introduction

1.1. Purpose of this Document

- 1.1.1 In the Issue Specific Hearings [**EV-017**] the ExA raised concerns that the construction period for major schemes was often longer than anticipated due to construction delays. In response to those concerns, the Applicant offered to provide further environmental information to reassure the ExA and the Secretary of State that even if the construction period were to extend, any such extension had been appropriately assessed and considered.
- 1.1.2 The purpose of this Environmental Statement (ES) Addendum Two is to assess whether an extension to the proposed construction programme, relating to the A47 Wansford to Sutton Scheme, hereafter referred to as the 'Scheme', would lead to further or changed potential significant environmental effects, and so change the conclusions of the existing ES and ES Addendum One [**TR010039/EXAM/9.35 Rev 1**].
- 1.1.3 In the Issue Specific Hearing [**EV-017**], construction period extensions of a third were suggested as common in major projects. The approach to assessment adopted in this ES Addendum Two has been to go further and to assess the potential impacts of a 50% extension to the assessed construction period, rounded up to 28 months. This addendum has considered each environmental assessment and either provided an updated assessment or a rationale for those assessments that will be unaffected by this change.
- 1.1.4 The purpose of the ES Addendum One [**TR010039/EXAM/9.35 Rev 1**] was to introduce and collate the design changes which have occurred during the Examination process and to clarify how, if at all, they change or alter the findings and conclusions of the ES.
- 1.1.5 This ES Addendum Two has been carried out in accordance with the approach and findings set out in the ES Addendum One [**TR010039/EXAM/9.35 Rev 1**] and considers the effects individually and cumulatively for all of the ES Chapters.

2. Construction Period

- 2.1.1. This ES Addendum Two provides an assessment to analyse the potential significant environmental effects, which may result if an extension to the construction programme were to increase the construction period from 18 months to 28 months.
- 2.1.2. The Applicant makes clear that it is only the temporal element of the construction period that has been considered and assessed. The intention is to assess delays to the required works comprising the Scheme. Any delays to programme which may result in the extension of the construction period would not indicate new or different works, merely that the assessed works would take place over a longer period of time.
- 2.1.3. It is also noted that for the reasons set out in the analysis of each of the environmental topics below, the assessments are likely to hold true if the construction period were to be extended for a shorter period, i.e. between 18 and 28 months, or indeed for a longer period. Although a longer construction period has not been formally assessed, it would amount to the same works spread over an even longer period, and the assessments of each environmental topic may be applied in those circumstances and the conclusions are likely to be identical. 28 months has been selected a reasonable worst case, as outlined above.

3. Review of Environmental Statement

3.1. Introduction

- 3.1.1. The following sections summarise the outcomes for each environmental assessment when considering the potential significant effects, which may arise if the construction period were to be extended to 28 months. This review has considered the existing environmental assessment detailed within the ES and the ES Addendum One [TR010039/EXAM/9.35 Rev 1].

3.2. Air Quality

- 3.2.1. Design Manual for Roads and Bridges (DMRB) LA105 describes the methodology for the assessment of risk from dust and the road transport emissions associated with the Construction Phase, and this was completed for the ES Chapter 5: Air Quality [APP-043].
- 3.2.1. In Chapter 5: Air Quality [APP-043] the duration of the construction phase was identified as 18 months. The Construction Dust Risk Assessment assesses the risk from dust in a series of buffers from the red line boundary, and the numbers of sensitive receptors within those buffers, to determine the risk to human health and any ecological receptors. An extension in the construction period from 18 to 28 months would not change the receptors identified, the buffer identified or increase the risks. Therefore, it is considered that an extension to the duration would not change the conclusions of the Construction Dust Risk Assessment. The mitigation measures recommended to ensure dust emissions are suitably managed would remain appropriate. Therefore, the conclusion reached in the ES Chapter 5: Air Quality [APP-043] for the Construction Dust Risk Assessment remains unchanged.
- 3.2.2. DMRB LA105 also sets out the method of assessment for road transport emissions associated with the construction phase. Where the construction phase duration is identified to be less than a 2-year duration, no further consideration is required.
- 3.2.3. In ES Chapter 5: Air Quality [APP-043], as the construction phase duration was anticipated to fall below the 2-year criteria, as set out in DMRB LA105, assessment of road traffic emissions during the construction phase was not carried out.
- 3.2.4. However, if the construction period were to extend beyond the 2-year criteria set out within DMRB LA 105, a review of the construction phase assessment of road traffic emissions would be required. This has been completed by the Applicant,

using a worst-case duration of 28 months, to determine if the conclusions reached in ES Chapter 5: Air Quality [APP-043] would remain valid.

- 3.2.5. The traffic data for the assessment addresses the numbers and frequency of both on-site heavy duty vehicle (HDV) movements within the redline boundary and those HDV movements going to and from site. These data were used to estimate the annual average daily flow for each calendar year of the construction phase on the road network. These numbers were then compared to the DMRB LA105 criteria. The scoping criteria is used to determine whether the air quality impacts of a project can be scoped out or require an assessment. These are an increase in:
- Annual average daily traffic (AADT) ≥ 1000 ; or
 - HDV AADT ≥ 200 .
- 3.2.6. The review of the traffic data associated with an extended construction period indicates that there would be HDV movements associated with construction from week 14 of 2023 to week 20 of 2025. Therefore, although the worst-case construction phase may be 28 months in duration, the traffic flow data indicates that HDV movements associated with this would be for 25 months.
- 3.2.7. Further analysis shows that only year 1 (2023) would result in an AADT of greater than the scoping criteria of 200 AADT. This fell below the DMRB LA105 scoping criteria for years 2 and 3 to 170 AADT HDV and 23 AADT HDV respectively.
- 3.2.8. Therefore, as only year 1 would result in the scoping criteria being triggered, any potential impact from road traffic emissions during the construction phase would be for a short duration and would be below the scoping criteria from year 2. Therefore, in line with the DMRB LA105, no further assessment would be required.
- 3.2.9. Therefore, the conclusions reached in ES Chapter 5: Air Quality [APP-043] remain unchanged.

3.3. Cultural Heritage

- 3.3.1. A potential extension in the construction period duration to 28 months would not affect the conclusions of the cultural heritage assessment within ES Chapter 6: Cultural Heritage [REP2-010].
- 3.3.2. Temporary effects described in ES Chapter 6: Cultural Heritage Table 6-5 are limited to a potential disruption should access be restricted during construction to Sacrewell Farm. Restricted access may have effects on the maintenance and

educational value of Sacrewell Farm. The proposed mitigation is to minimise any potential access restrictions and to ensure adequate temporary signage is in place (should it be necessary). The Outline Traffic Management Plan [REP2-030] Table 1, page 19, states that no access to businesses will be altered due to the works. The original assessment with these commitments in place is a Neutral magnitude of impact with a significance of effect of No Change. An increase in works duration would not affect these commitments and therefore the assessment of impact and effect remains unchanged.

- 3.3.3. Therefore, the conclusions reached in ES Chapter 6: Cultural Heritage [REP2-010] remain unchanged.

3.4. Landscape

- 3.4.1. In accordance with DMRB LA107 (Revision 2, 2020) the landscape and visual impact assessment within ES Chapter 7: Landscape and Visual Effects [APP-045] considers effects during construction. This factors in the removal of tree cover and the formation of earthworks during construction. It also considers the temporary landscape and visual effects associated with the temporary presence of construction compounds, haul routes and construction activities (paragraph 7.8.1) ES Chapter 7: Landscape and Visual Effects. The assessment already identifies significant construction phase effects both on the landscape (paragraphs 7.10.2 to 7.10.6) and on some views and visual receptors (paragraphs 7.10.7 to 7.10.24).
- 3.4.2. If the construction period were to be extended to 28 months, that would not alter the conclusions of ES Chapter 7: Landscape and Visual Effects [APP-045] with regard to either landscape effects or visual effects. The temporary presence of construction compounds, haul routes and construction activities would still be regarded as short-term (paragraph 7.4.7) ES Chapter 7: Landscape and Visual Effects.
- 3.4.3. The significant construction phase landscape and visual effects that are reported in, ES Chapter 7: Landscape and Visual Effects [APP-045], are in any case primarily the result of the removal of tree cover and the formation of earthworks during the overall construction period and these impacts would remain unaltered by an increase in the duration of the works as many of the impacts would occur in the earlier stages of construction in any event.

3.5. Biodiversity

- 3.5.1. An extension to the construction period to 28 months does not affect the assessment contained within the ES Chapter 8: Biodiversity [**AS-015**].
- 3.5.2. If the construction period were to be 28 months, that would not result in any additional permanent impacts (such as habitat loss). However, a longer construction period would increase the duration of temporary impacts associated with construction (such as light and noise disturbance). A review of all Biodiversity receptors was undertaken to examine whether the effects reported in the ES would change as a result of a longer construction period.
- 3.5.3. For the majority of receptors, the effects of disturbance are considered low therefore an increase in the duration of construction would have a negligible change in respect to the ES.
- 3.5.4. There will be an additional minor adverse impact on three receptors (bats, breeding birds, and barn owls) due to the increased duration of noise, light, and vibration disturbance. These impacts are most notable in the breeding or active season for these species (generally March to September). The original programme covered two breeding seasons, and this has been accounted for in the assessment of ES Chapter 8: Biodiversity [**AS-015**], which concluded that the pre-mitigation impact would be Major Adverse on all three of these receptors for the following reasons:
 - 3.5.5. Bats: direct mortality, permanent loss of roosts, noise/ light/ vibration disturbance, permanent loss of foraging and commuting habitat.
 - 3.5.6. Breeding birds: direct mortality, loss/obstruction of foraging habitat, noise/ light/ vibration disturbance.
 - 3.5.7. Barn owls: loss of foraging habitats, noise/ light/ vibration disturbance.
- 3.5.8. The extended construction period would include part of a third breeding period (up to June); however, in combination with the above impacts, the pre-mitigation level of impact on the three receptors is deemed to remain unchanged (Major Adverse). The mitigation measures outlined within commitments (BD4, BD8, BD9) of the EMP [**REP6-002**] will also remain sufficient and proportional.
- 3.5.9. The mitigation measures outlined in the ES Chapter 8: Biodiversity [**AS-015**], such as provision of bird nest boxes and bat boxes on retained vegetation >50m of the Scheme (to reduce risk of road collision) would be put in place, and therefore the residual effects of these additional impacts would not change. As such, the conclusions reached in ES Chapter 8: Biodiversity remain unchanged;

the significance of residual impacts on bats remains Slight Adverse, and on birds and barn owl would remain Neutral.

3.6. Geology and Soils

- 3.6.1. A 28 month construction period would not affect the assessment contained within the ES Chapter 9: Geology and Soils [REP2-012]. Criteria used in the assessment are both current and conservative with no foreseen updates to the criteria identified within the updated timescales. The Local Plans used in the assessment cover beyond the proposed extended construction period. Furthermore, any extension to the construction period would not affect the considered volumes of materials or the disturbance required to deliver the Scheme.
- 3.6.2. A 28 month construction period would not affect the agricultural assessment contained within the ES Chapter 9: Geology and Soils [REP2-012]. The temporary land-take would still be considered of minor magnitude as it would be restored to agriculture following the completion of the construction phase.

3.7. Material Assets and Waste

- 3.7.1. A 28 month construction period would not affect the assessment contained within the ES Chapter 10: Material Assets and Waste [APP-048]. Criteria used in the assessment are both current and conservative with no foreseen updates to the criteria identified within the updated timescales, with the mitigations detailed within the Environmental Management Plan (EMP) [REP6-002] remaining unaltered, irrespective of the extended timescales. The Local Plans used in the assessment cover beyond the proposed extended construction period. Furthermore, a change to the construction period would not affect the considered volumes of materials or the disturbance required to deliver the Scheme.

3.8. Noise and Vibration

- 3.8.1. A 28 month construction period would not affect the assessment contained within ES Chapter 11: Noise and Vibration [REP2-014].
- 3.8.2. The magnitude of impact thresholds for construction noise are based on daily levels, and construction vibration is based on short term event levels. There is a time-based element to the assessment of significance as DMRB LA 111 paragraph 3.19 advises that construction noise shall constitute a significant effect where it is determined that a moderate or major impact will occur for a duration of ten or more days or nights in any 15 consecutive days or nights: or for a total number of days exceeding 40 in any six consecutive months. However, the

assessment was worst-case and assumed that each of the construction activities has the potential to exceed the durations at which significant effect may occur. On this basis suitable mitigation was recommended to manage and reduce these impacts and the extension to the construction phase would not change the conclusions or mitigation suggested, therefore, any extension to the construction period would not change the findings and conclusions of ES Chapter 11: Noise and Vibration [REP2-014].

3.9. Population and Human Health

- 3.9.1. A construction period of 28 months would not affect the assessment or outcome on access to private property, communities, development land and walkers, cyclists and horse-riders (WCH) detailed in the ES Chapter 12: Population and Human Health [REP4-004].
- 3.9.2. In accordance with DMRB LA 112 Population and human health, an extension to the construction period would not affect the conclusions of the assessment or likely significant effects of ES Chapter 12: Population and Human Health [REP4-004].
- 3.9.3. In line with DMRB LA 112 the sensitivity of receptors and magnitude of impact for land use and accessibility is determined based on the proximity of the receptor to the Scheme, loss of or damage to the resource or an alteration in key characteristics, available alternatives, level of use, and the introduction of or removal of severance during the construction period. For WCH, the magnitude of impact relates to the increase (adverse) or decrease (beneficial) in WCH journey length. The extended duration of construction would not affect the proximity, or the provision of access and it would not affect the reported changes in WCH journey length. Moreover, the Hereward Way Permissive 3 footpath, which runs northwards from the A47 along the private road serving Sacrewell Farm would be maintained during the construction period. As noted in the EMP [REP6-002] traffic management measures will be secured as part of the Traffic Management Plan, to ensure disruption is minimised on those travelling between communities and those travelling to facilities and businesses. Therefore, adequate access will be provided during the construction period.
- 3.9.4. There is potential for the assessed construction period to result in a longer exposure for residents to potential human health effects due to effects on air quality, noise and landscape amenity. However, the conclusions of the air quality, noise and landscape assessments within this ES Addendum Two remain unchanged by the extended construction period. Therefore, it is not considered that the conclusions of the human health assessment would change as a result of the extension.

- 3.9.5. The assessment on human health remains the same as reported in ES Chapter 12: Population and Human Health [REP4-004]. The effects on the health determinants would remain Neutral as the construction period would still be considered temporary.

3.10. Road, Drainage and Water Environment

- 3.10.1. A 28 month construction period would not affect the surface water or groundwater assessments within ES Chapter 13: Road Drainage and the Water Environment [REP3-011]. This is because the abstraction licences for dewatering during construction have already been included as a worst-case assumption and a change to the construction period would not change the conclusions of the assessment or the resulting mitigation proposed within ES Chapter 13: Road Drainage and the Water Environment, and the EMP [REP6-002].

3.11. Climate

- 3.11.1. It is not anticipated that an extended construction period (from 18 months to 28 months) would change the outcome of the assessment, both for the impact of the scheme on climate change and the impact of climate change on the scheme detailed in ES Chapter 14: Climate [APP-052].
- 3.11.2. The Green House Gases (GHG) assessment to quantify emissions from the construction phase of the project was based on data from a bill of quantities on the proposed design at Stage 3. Estimates of carbon emissions (tCO₂e) were made to assess the emissions from the production of materials, their transport to site, and plant and construction emissions. This quantified the total emissions from the construction phase and the assessment would not change based on the duration of the construction period.
- 3.11.3. With regards to the impact of climate change during the construction phase, ES Chapter 14 [APP-052] states:

“The Scheme may be subject to weather extremes (as opposed to extreme weather events) during construction. However, it is not anticipated that verifiable climate change will occur between the time of design assessment and the end of the construction period (approximately 16 months). Construction works are therefore not considered to be vulnerable to climate change, thus no associated mitigation, other than what will be reasonable site practice (e.g., reviewing weather conditions before commencing work, providing appropriate Personal Protective Equipment, provision of shade and water on-site etc.) at the time of design finalisation, is considered to be necessary.”

3.11.4. This same conclusion would be reached if the construction period was 28 months.

3.12. Cumulative Effects Assessment

3.12.1. It has been determined that the cumulative effects assessment would not need to be updated as a result of a construction period extension.

3.12.2. The conclusions outlined in the ES Chapter 15: Cumulative Effects [AS-018] for single project effects would not change as an extension to the construction period would not alter the conclusions of the other ES chapters. The one significant effect identified in ES Chapter 15: Cumulative Effects was the Moderate adverse effect on Station House. However, there have been no amendments to the conclusions of any ES chapter following the assessment within this ES Addendum Two as shown in Table 1.1 below, therefore this effect would not change.

3.12.3. The conclusions outlined for different project effects at the time of submission of the ES would not change from ES Chapter 15: Cumulative Effects [**AS-018**]. There were no developments that were determined to require further assessment in the shortlist for the original ES Chapter 15: Cumulative Effects [**AS-018**] assessment. On the basis that this addendum uses the baseline that was determined at the time the original cumulative effects assessment was undertaken, it is not considered that the conclusions of the cumulative effects assessment would change as a result of any construction period extension.

3.13. Summary of Findings

- 1.1.6 Table 1.1 summarises which ES chapters require amendments as a result of a scenario where the construction period had a duration of 28 months, (✓) means change is required and (✗) means no change is required.
- 1.1.7 The findings and conclusions of each ES Chapter have been examined to determine the effects of the construction period extending from 18 months to 28 months. Table 1.1 shows the findings of this review, which indicate that if the construction period were to be extend to 28 months that **would not** affect the findings and conclusions of the ES Chapters and therefore no further assessment is required.

Table 1.1 ES Chapters affected by a 28 month construction period

ES Chapters	Construction Period lasting (28 months)
Chapter 5 - Air quality [APP-043]	✗
Chapter 6 - Cultural Heritage [REP2-010]	✗
Chapter 7 - Landscape and Visual effects [APP-045]	✗
Chapter 8 - Biodiversity [AS-015]	✗
Chapter 9 - Geology and Soils [REP2-012]	✗
Chapter 10 - Material assets and Waste [APP-048]	✗
Chapter 11 - Noise and Vibration [REP2-014]	✗
Chapter 12 - Population and Human Health [REP4-004]	✗
Chapter 13 - Road, Drainage and the Water Environment [REP3-011]	✗
Chapter 14 - Climate [APP-052]	✗
Chapter 15 - Cumulative effects assessment [AS-018]	✗