

A47 Wansford to Sutton Dualling

Scheme Number: TR010039

Volume 9 **9.35 Environmental Statement Addendum** **One**

The Infrastructure Planning (Examination Procedure) Rules 2010
Rule 3(2)(b)
Planning Act 2008

June 2022
Deadline 8

Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning
(Examination Procedure) Rules 2010**

A47 Wansford to Sutton
Development Consent Order 202[x]

**9.35 ENVIRONMENTAL STATEMENT
ADDENDUM ONE**

Rule Number	Rule 3(2)(b)
Planning Inspectorate Scheme Reference	TR010039
Application Document Reference	TR010039/EXAM/9.35
Author	A47 Wansford to Sutton Project Team, National Highways

Version	Date	Status of Version
Rev 0	May 2022	Draft for Consultation
Rev 1	June 2022	Deadline 8

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1. INTRODUCTION

1.1. Purpose of this document

- 1.1.1 The purpose of the Environmental Statement (ES) Addendum One is 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. The ES Addendum One will also set out the need for these design changes and how they affect the Development Consent Order (DCO) and ES documents.

2. DESIGN CHANGES

2.1. Introduction

- 2.1.1. There are three proposed design changes described in this ES Addendum One relating to the A47 Wansford to Sutton Scheme, hereafter referred to as the 'Scheme'. Details of these changes are set out in sections 2.2, 2.3 and 2.4 below.
- 2.1.2. This ES Addendum One has considered the effects of each design change individually and cumulatively for all of the ES Chapters.
- 2.1.3. All three of the design changes have been illustrated and updated accordingly in Sheet 3 and Sheet 7 of the Environmental Masterplan Rev 3 [TR010039/APP/6.8 Rev 3] as shown in Appendix A.

2.2. Design Change One: Change to the alignment of the westbound off-slip from the dualled A47

- 2.2.1. The Applicant has carried out a detailed review of the construction phasing requirements associated with utility diversions in this location and proposes to move the westbound off-slip (Work no. 15) 14 m to the north. The purpose of this proposed change is to achieve a more efficient interface between the Scheme and assets belonging to Anglian Water, Western Power Distribution, Gigaclear, Openreach, Vodafone and GTT.
- 2.2.2. The findings and conclusions of each ES Chapter are to be reviewed against this design change to determine whether there are no new or different likely significant effects than those previously reported in the ES due to this design change.
- 2.2.3. This design change is illustrated in the Environmental Masterplan Rev 3 [TR010039/APP/6.8 Rev 3].

2.3. Design Change Two: Modification of the means of access to Sacrewell Farm

- 2.3.1. The Applicant proposes to modify the access alignment for the following reasons:
 - a) to improve visibility (and to obviate the need for convex mirrors)
 - b) to respond to the Examining Authority's (Hearing Action Point 38 [EV-021])

- c) to avoid interface with the Anglian Water assets shown on the Environmental Masterplan [TR010039/APP/6.8 Rev 3]

- 2.3.2. The change will result in a more efficient design, taking into account objectives (a) to (c) above.
- 2.3.3. The proposed modification will consist of changes to the alignment of the access to Sacrewell Farm as shown on the Environmental Masterplan [TR010039/APP/6.8 Rev 3].
- 2.3.4. The findings and conclusions of each ES Chapter are to be reviewed against this design change to determine whether there are no new or different likely significant effects than those previously reported in the ES due to this design change.
- 2.3.5. This design change is illustrated in the Environmental Masterplan Rev 3 [TR010039/APP/6.8 Rev 3].

2.4. Design Change Three: Shortening of cycle route at the eastern extent of the Scheme / new sections of footway on northern and southern frontages of Peterborough Road

- 2.4.1. The Applicant proposes to:
 - a) shorten the cycle route at the eastern extent of the Scheme by deleting the section of cycle track proposed on the northern frontage of Peterborough Road (SU15 to SU16)
 - b) provide new sections of footway on both the northern and southern frontages of Peterborough Road.
- 2.4.2. The proposed change will mean that the cycle track starts/finishes at the SU14 cycle track at Nene Way. This is a designated quiet route deemed suitable for use by pedestrians, cyclists and equestrians as shown on Sheet 7 of the Rights of Way and Access Plans [TR010039/APP/2.4 Rev 3]. This will improve safety for cyclists by allowing them to join and leave Peterborough Road at the Nene Way junction and avoid the need to cross Peterborough Road and join the eastbound carriageway in the vicinity of the existing bus layby. Part (b) of the proposed change would facilitate pedestrian access between Nene Way and the existing bus stop.
- 2.4.3. The findings and conclusions of each ES Chapter are to be reviewed against this design change to determine whether there are no new or different likely significant effects than those previously reported in the ES due to this design change.

2.4.4. This design change is illustrated in the Environmental Masterplan Rev 3 [TR010039/APP/6.8 Rev 3].

3. REVIEW OF ENVIRONMENTAL STATEMENT

3.1. Introduction

- 3.1.1. The following section summarises the outcomes of a review of the proposed design changes against the existing environmental assessment detailed within the ES.

3.2. Air Quality

- 3.2.1. The proposed design changes detailed above do not affect the findings or conclusions reached in ES Chapter 5: Air Quality [APP-043] and no alterations are required to this ES Chapter for the following reasons:

Change One:

- 3.2.2. The proposed design change includes altering the alignment of the Sacrewell Farm access road. Sacrewell Farm is the closest sensitive receptor to this Scheme amendment.
- 3.2.3. As the distance to the closest receptor will result in an increase in distance this would result in a positive change in air quality.

Change Two:

- 3.2.4. The proposed design changes for the pumping station will result in some of the alignment changing. However, there are no sensitive receptors within close proximity of this change that would be affected. Therefore, the air quality assessment conclusions remain unchanged.

Change Three

- 3.2.5. The proposed design change would result in some height changes of the road. However, due to the complexities in air quality dispersion modelling all roads are modelled at 0 m above ground height. Therefore, the air quality assessment conclusions remain unchanged.

3.3. Cultural Heritage

- 3.3.1. The proposed design changes do not affect the findings and conclusions of ES Chapter 6: Cultural Heritage [REP2-010] and no alterations are required to this ES Chapter for the following reasons:

Change One:

- 3.3.2. This option relocates the potential disturbance of archaeological remains within the Scheme limits and within a single zone of archaeological potential. This is well within the scope of the proposed archaeological mitigation. Changes in distance from sensitive settings is not significant, as these settings are far enough away that the difference in change to the landscape is imperceptible. There will be no changes to the physical effects on recorded archaeological sites, or changes to the impact caused by changes in the setting of heritage assets from that reported in ES Chapter 6: Cultural Heritage [REP2-010].
- 3.3.3. Changes in distance from sensitive settings are not significant, as these settings are far enough away that the difference in change is imperceptible. There would be no change to the significance of effect on the heritage assets as a result of the changes in traffic noise level, lighting or visual intrusion.

Change Two:

- 3.3.4. A hard landscaping element of the Scheme would move further away from the south-eastern limit of the Sacrewell Farm site and therefore from the Grade II* listed mill. Visitors would also experience a greater thresholding effect from passing through more retained/replanted trees currently forming the field boundary at this location on the way to the Sacrewell visitor entrance. These are considered improvements however, the overall effect is so small as to be negligible or neutral. The previously assessed effect on the mill derives from loss of rural context in the fields to its south, and this is not materially lessened. Archaeological potential in the altered footprint is not materially different to the previous proposals. Greater distance from the Sacrewell Farm site reduces the potential for post-medieval remains but, moving south increases the potential for older remains which, in turn is decreased by the likelihood of damage from tree roots. This variation of potential is very slight and well within the scope of the proposed archaeological mitigation.
- 3.3.5. Moving the closest traffic further south would reduce the level of traffic noise within the Sacrewell Farm site and the alignment shift would direct vehicle lights further from the site. However, this corner of the Sacrewell Farm site is already well screened and isolated from noise and the vast majority of traffic would be during daylight hours. Again, these improvements are considered so small as to be negligible or neutral. The proposed design changes do not result in any

change to the assessment of operational effects on cultural heritage. There would be no change to the significance of effect on the heritage assets as a result of the changes in traffic noise level, lighting or visual intrusion.

Change Three:

- 3.3.6. The proposed change is within the limits of the Scheme and result in negligible alterations to the Scheme footprint within a single zone of archaeological potential. There is no overall variation in archaeological potential and the change in design is well within the scope of the proposed archaeological mitigation. There will be no changes to the physical effects on recorded archaeological sites, or changes to the impact caused by changes in the setting of heritage assets from that reported in ES Chapter 6: Cultural Heritage [REP2-010].
- 3.3.7. In summary, the proposed design changes do not result in any change to the assessment of operational effects on cultural heritage. There would be no change to the significance of effect on the heritage assets as a result of the changes in traffic noise level, lighting or visual intrusion.

3.4. Landscape and Visual effects

- 3.4.1. The proposed design changes detailed above do not affect the findings or conclusions reached in ES Chapter 7: Landscape and Visual Effects [APP-045] and no alterations are required to this ES Chapter for the following reasons.

Change One:

- 3.4.2. The change to the alignment of the westbound off-slip places the local access road to the north of the open space and former picnic site adjacent the River Nene (linking to both Sacrewell Farm and to the petrol station) approximately 14 m further north. This places the alignment closer to the proposed alignment of the main A47 carriageways to the north and further away from the River to the south. In doing so the new alignment runs at a slightly higher elevation on this gently sloping ground and does not make use of the area of existing hardstanding which runs along the northern edge of the riverside open space and former picnic site (a former road). As a consequence, this linear area of existing hardstanding would remain in situ and would run parallel to the new road. The retained area of hardstanding would be used to provide maintenance access to land to the west.
- 3.4.3. The overall alteration to the effect of the Scheme on landscape character in the vicinity of this change would be very limited. The alternative alignment would not necessitate significant areas of additional tree removal. There would be some minor disbenefits to the landscape of not taking advantage of the area of existing hardstanding to accommodate the new road, but these would be offset by

placing the vehicular highway further away from the River allowing for the creation of a larger riverside open space. The principles of the environmental masterplan would be delivered in a similar way with hedgerows with trees on both sides of the highway balancing the allowance of views south over the valley for road users with the need to partially screen traffic movements when viewed by visual receptors from the south. Overall, the landscape character outcomes would be very similar.

- 3.4.4. The overall alteration to the effect of the Scheme on visual amenity in the vicinity of this change would also be very limited. Views towards this sloping land across the valley floor from the south, such as from the northern fringe of the settlement of Stibbington, have been carefully considered in the landscape and visual impact assessment due to the potential for adverse visual effects as a consequence of visible traffic movements on elevated ground to the north of the valley. The more northerly alignment of the westbound off-slip combined with the continuing opportunity to introduce buffer planting along the northern edge of the riverside open space and former picnic site would ensure that visibility of traffic movements in views from the south would still be adequately mitigated. The significance of the visual effects on sensitive receptors to the south would not alter in either year 1 or year 15 as a consequence of this change. There would also be some minor benefits to visual amenity for users of the Nene Way in this location as a result of the introduction of a hedgerow with trees between them and the vehicular westbound off-slip.

Change Two:

- 3.4.5. The change to the alignment of the proposed new access road into Sacrewell Farm would introduce a gently curving alignment in cutting which would pass through the existing woodland belt which lies to the west of the existing access road into Sacrewell Farm.
- 3.4.6. The overall alteration to the effect of the Scheme on landscape character in the vicinity of this change would be very limited. Although the existing tree belt would be impacted and severed by the new alignment, the overall impact of the Scheme on tree cover in this vicinity would be very similar as detailed in the Arboricultural Impact Assessment [REP4-007] section below. The principles of the environmental masterplan would be delivered in a similar way with the agricultural field pattern to the east and west restored with new hedgerows and extensions to the existing woodland belt to deliver a larger wooded area between the old and new access roads into Sacrewell Farm (the old access road would be grubbed up and integrated with the agricultural field to the east). Overall, the long term landscape character outcomes would be very similar despite the severance of the tree belt.

3.4.7. The overall alteration to the effect of the Scheme on visual amenity in the vicinity of this change would also be very limited. There are relatively few visual receptors that would have views of the changed alignment of the access road into Sacrewell Farm, which would in any case be in cutting. Visibility would principally be restricted to vehicular users of the access road into Sacrewell Farm and users of the permissive bridleway which would run alongside it. The alteration to their visual amenity as a consequence of this change in the access road alignment would be minimal. There are no residential areas with views of this location. There would also be some minor visual benefits of the access road alignment passing slightly further away from the silk mill, children's farm and other visitor areas at Sacrewell Farm.

Change Three:

3.4.8. The shortening of the cycle route at the eastern end of the Scheme at Peterborough Road would cause no increase in either the landscape character or visual amenity effects of the Scheme. Changes would be negligible. The environmental masterplan would be unaltered by this change. The shortening of the cycle route would not alter areas of proposed planting other than a minor modification of hedgerow alignments at the junction. Nor would it present the opportunity for new planting due to a requirement to maintain open sight lines to the north of the junction in this vicinity.

Arboricultural Impact Assessment

3.4.9. The proposed design changes detailed above do not affect the findings or conclusions reached in ES Appendix 7.6: Arboricultural Impact Assessment [REP4-007] and no alterations are required to this ES Appendix for the following reasons.

3.4.10. The proposed design changes: One and Three have no implications for existing trees and the tree retention and removal proposed remains as detailed within ES Appendix 7.6: Arboricultural Impact Assessment [REP4-007]

3.4.11. The Design Change Two proposed alternate layout for Scarewell Road however, does have implications for the extent of tree retention and tree removal detailed within ES Appendix 7.6: Arboricultural Impact Assessment [REP4-007]. The vegetation affected by the proposed amendment comprises four groups of trees recorded as G10, G11, G12 and G13 within ES Appendix 7.6: Arboricultural Impact Assessment [REP4-007]

3.4.12. With respect to G10 this feature was assessed as being of a high retention value (BS5837:2012 Category A) and the initial proposal required the removal of a section of the group totalling approximately 307 m² in area. The amended

proposal will permit the full retention of this group with no impact upon the retained trees.

- 3.4.13. With respect to G11 this feature was assessed as being of a low retention value (Category C) and the initial proposal required the removal of a section of approximately 79 m² in area. The revised proposal will reduce the extent of vegetation requiring removal within this group to approximately 20 m².
- 3.4.14. G12, which has an overall area of approximately 1938 m², was assessed as being of a moderate retention value (Category B) and initial proposals required the removal of approximately 314 m² of vegetation from the edge of the group, the amended proposal will increase the extent of tree removal required to approximately 787 m² and clearance works will now bisect the group rather than only affecting the edge of the group.
- 3.4.15. G13, which has an overall area of approximately 2136 m², was also assessed as being of a moderate retention value (Category B) and is of a similar nature to G12. This group was not impacted by the original proposal and was identified for full retention. The amended proposal will require the removal of approximately 72 m² of the group.
- 3.4.16. In summary the proposed design amendment will permit the retention of the trees identified in G10, a Category A feature, but will require a small degree of tree loss from G13, a Category B feature, which was previously retained. G10 and G12 will remain as being partially removed, though the extent and location of removal required will be altered. Overall, the amended proposal does result in a slight increase in tree removal, of Category B trees of a moderate value, of c. 179 m² versus the existing arrangement, though this is considered to be offset by the retention of the Category A group (G10).
- 3.4.17. The ES Appendix 7.6: Arboricultural Impact Assessment report [REP4-007] conclusion forming part of Chapter stated the following:
- “Based on the current proposals, 31 individual trees, 18 groups of trees and two hedgerows will require complete removal in order to facilitate the Scheme. In addition, 27 tree groups and two hedgerows will require partial removal. Some special construction techniques are required to ensure other trees can be retained during the course of the works.”*
- 3.4.18. This conclusion does not change as a consequence of the proposed design changes as the partial removal of G10 previously required is now substituted by the partial removal of G13. G10 and G12 remain, as previously assessed, partially removed.

3.5. Biodiversity

3.5.1. The proposed design changes do not affect the findings and conclusions of ES Chapter 8: Biodiversity [**AS-015**] and no alterations are required to this ES Chapter for the following reasons:

Change One:

3.5.2. This proposed design change will result in the additional loss of arable habitat. Due to the low biodiversity value of arable land, the change in effect of this additional impact on all receptors was deemed a negligible negative effect. For otters and water vole, the change was deemed a minor positive effect, by moving the impact further from the River Nene. No ecological features, such as bat roosts, badger setts, etc will be impacted by this change.

3.5.3. The proposed change will also lead to the reduction in size of the area proposed for ecological mitigation. To compensate for the reduced area for ecological mitigation, additional areas have been designated for ecological compensation and habitat creation, which is shown in the Environmental Masterplan Rev 3 [**TR010039/APP/6.8 Rev 3**]. This includes the land to the west of the slip road (between the slip road and the existing A1 carriageway) and a section in the east of the site (between the retained portion of the current A47 carriageway and the newly created A47 dual carriageway). Access to these areas will also be provided, to ensure that the grassland habitat created can be managed and maintained in a favourable condition.

Change Two:

3.5.4. This proposed design change will result in the loss of woodland habitat and severance of a small woodland belt running alongside the existing Sacrewell Farm access. However, the design change will also result in the retention of woodland habitat further north that was originally designated for removal, and as such the total loss of woodland habitat will remain much the same. Therefore, the change in the effect of the impact was deemed to be negligible on all species for which this habitat is suitable (badgers, bats, reptiles, amphibians, birds, invertebrates). For barn owls, otters, and water voles, the proposed change will have a minor positive effect by moving the impact and disturbance further from the Wittering Brook and potential barn owl nest sites.

Change Three:

3.5.5. This proposed design change will not result in any additional loss of habitat. As such, the change in effect of this impact on all receptors is negligible.

3.6. Geology and Soils

- 3.6.1. The proposed design changes do not affect the findings and conclusions of the Geology and Soils ES Chapter as no new sources or receptors are being introduced. The existing data provided within the ES Chapter is sufficient to characterise the materials and risks to be encountered in light of the design changes. Furthermore, no alterations are required to ES Chapter 9: Geology and Soils [REP2-012].

Agricultural Land Classification (ALC)

- 3.6.2. The proposed design changes result in a very small increase in permanent land take. The additional permanent land take includes:

- Approximately 0.2 ha Grade 2 agricultural land
- Approximately 0.3 ha Subgrade 3a agricultural land
- Approximately 0.2 ha Subgrade 3b agricultural land.

- 3.6.3. The design changes to the Scheme would result in a very small increase in the permanent loss of agricultural land, however the magnitude of impact and the significance of effects would remain the same. The Scheme would still result in very large significance of effect due to the loss of Grade 2 agricultural land and a moderate adverse significance of effect due to the loss of Grade 3a and Grade 3b agricultural land. The Scheme is still considered to have significant effects due to the permanent loss of agricultural land.

3.7. Material Assets and Waste

- 3.7.1. The design changes do not affect the findings and conclusions of ES Chapter 10: Material Assets and Waste [APP-048] and no alterations are required to this ES Chapter for the following reasons:

Material Assets

- 3.7.2. A qualitative assessment of the design changes indicates that changes to the overall design are not substantial. Subsequently, the scale of changes to the quantities of materials required for construction are not considered significant enough to alter the outcomes of the original assessment.

- 3.7.3. As detailed in Table 3.13 of DMRB LA110, the significance categories for assessing the effects on material assets from the Scheme relate to targets for recycled content, recovery and recycling. Therefore, unless there is a departure from the construction best practices set out in ES Chapter 10: Material Assets

and Waste [**APP-048**], there would be no change to the predicted residual effect (with mitigation) of slight adverse and not significant

Waste

- 3.7.4. A qualitative assessment of the design changes indicates that changes to the overall design are not substantial. Subsequently, the scale of changes to the quantities of waste generated are not considered significant enough to alter the outcomes of the original assessment.
- 3.7.5. The original assessment compared generated wastes against a regional landfill capacity of 45,434,000 m³. For a significant impact, a greater than 1% reduction or alteration to this landfill capacity would need to be realised (as detailed in Table 3.13 of DMRB LA110).
- 3.7.6. Based on a worst-case assumption that all waste generated from the Scheme would be disposed of to landfill (71,209 m³), it was assessed originally that this would utilise approximately 0.16% of the regional landfill capacity with a resultant not significant impact.
- 3.7.7. As there are no substantial changes to the waste quantities a greater than 1% reduction in the regions landfill capacity is not anticipated. For a significant impact, the amount of generated wastes would need to increase to over 454,340 m³.
- 3.7.8. In practice a large proportion of waste from the Scheme is likely to be recovered rather than disposed of to landfill, further reducing the overall quantities of waste requiring landfill disposal.
- 3.7.9. Therefore, there would be no change to the predicted residual effect (with mitigation) of slight adverse and not significant as reported in ES Chapter 10: Material Assets and Waste [**APP-048**].

3.8. Noise and Vibration

- 3.8.1. The design changes do not affect the findings and conclusions of ES Chapter 11: Noise and Vibration [**REP2-014**] and no alterations are required to this ES Chapter for the following reasons:
- 3.8.2. The potential noise and vibrations effects of the proposed changes have been considered. This has included consideration of the temporary effects of noise and vibration arising from the construction of the three proposed design changes and the permanent effects of noise arising from the operation of the Scheme.

- 3.8.3. In common with the ES, the effects of operational vibration are scoped out of the assessment. Vibration arising from the operation of the three proposed changes will not have potential to lead to significant effects.

Change One

- 3.8.4. The proposed change includes the relocation of the A47 westbound off-slip 14 m to the north in the vicinity of the proposed pumping station access road and existing service routes. The closest receptors to the amended westbound off-slip are circa 180 m to the west, beyond the A1 Great North Road (Wansford Mews).
- 3.8.5. The distance between the closest construction works associated with the westbound off-slip and the Wansford Mews receptors is not affected by the proposed change. Therefore, the level of construction noise and vibration at these receptors due to the off-slip works will remain the same as the previous design.

Change Two

- 3.8.6. The proposed change includes changes to the alignment of the Sacrewell Farm access road. Sacrewell Farm is the closest sensitive receptor to this proposed change.
- 3.8.7. The proposed change access road is circa 70 m from the closest building at Sacrewell Farm, whereas the previously proposed access road was circa 34m from the closest building at Sacrewell Farm. For this reason, the proposed change is expected to result in lower levels of construction noise and vibration at Sacrewell Farm than the previous design.
- 3.8.8. The construction compound location near the Sacrewell Farm is not affected by the proposed change. Therefore, the effects of noise and vibration from the construction compound remain the same as presented within the ES.

Change Three

- 3.8.9. The proposed change includes the omission of a cycle route versus the provision of footways along Peterborough Road. There are no sensitive receptors within 300 m of these works and the type of construction machinery and activities associated with construction of the Scheme and the design change are the same.

Noise and Vibration construction commitments

- 3.8.10. Commitments relating to construction noise and vibration are stated in the Environmental Management Plan [REP6-002]. Commitment NV1 requires the Contractor to develop an appropriate Construction Noise Management Plan

(CNMP). The CNMP requires construction noise to be assessed with the latest construction methodology information. The assessment informs the Contractor where temporary screening is required to avoid significant effects due to construction noise. In additional commitment NV2 also requires that temporary noise barriers are provided in the vicinity of Sacrewell Farm. Commitment NV1 therefore provides a suitable mechanism for ensuring that the effects of noise arising from the construction of the Scheme will remain not significant.

- 3.8.11. Given the above, the conclusions of the ES in relation to construction noise and vibration are unaffected by the proposed design changes.

Operational effects

- 3.8.12. The closest receptors to the Scheme amendments are as identified above (Sacrewell Farm and Wansford Mews). Environmental Statement Figures 11.4 and 11.5 [APP-074] demonstrate that the major sources of road traffic noise at these receptors are the proposed A47 mainline and the A1 Great North Road respectively.
- 3.8.13. Traffic flows and speeds on (and therefore the resulting level of road traffic noise from) the A47 westbound off-slip and the Sacrewell Farm access road are significantly lower. In addition, at Sacrewell Farm (the receptor subject to lower levels of road traffic noise from trunk roads in the Do Something scenario), the proposed design changes has relocated the access road further away from this receptor.
- 3.8.14. The proposed design changes are not located within or near to Noise Important Areas.
- 3.8.15. Commitment NV3 of the Environmental Management Plan [REP6-002] requires the Contractor to provide a noise-reducing road surface along the proposed A47 dual carriageway (with the exception of bridge decks). Commitment NV3 therefore provides a suitable mechanism for ensuring that the effects of noise arising from the operation of the Scheme will remain not significant.
- 3.8.16. Given the above, the conclusions of the ES in relation to operational noise are unaffected by the proposed design changes.

3.9. Population and Human Health

- 3.9.1. The design changes do not affect the findings and conclusions of ES Chapter 12: Population and Human Health [REP4-004] for the following reasons:

Private property and housing

- 3.9.2. The proposed design changes do not result in any changes to the assessment on private property and housing. The results therefore remain as outlined in ES Chapter 12: Population and Human Health [REP4-004]

Community land and assets

- 3.9.3. The proposed design changes do not result in any changes to the assessment on community land and assets. The results therefore remain as outlined in ES Chapter 12: Population and Human Health [REP4-004].

Development land and business

- 3.9.1. The proposed design changes do not result in any changes to the assessment on development land and business. The results therefore remain as outlined in ES Chapter 12: Population and Human Health [REP4-004].

Agricultural Land Holdings – Agricultural Impact Assessment

- 3.9.2. The proposed design changes result in a very small increase in permanent land take from Holding 1 and Holding 2.
- 3.9.3. The design changes to the Scheme would result in a very small increase in the permanent loss of agricultural land, however, the magnitude of impact and the significance of effects would remain the same for both affected agricultural holdings.
- 3.9.4. The additional land take from Holding 1 results in a 9.90 ha permanent land take which represents less than 3% of the total holding. The additional land take from Holding 2 results in a 0.33 ha permanent land take which represents less than 1% of the total holding. The significance of effects would remain slight adverse on both Holding 1 and 2.

Walking, Cycling and Horse Riding (WCHR)

- 3.9.5. The design changes do not affect the findings and conclusions of the WCHR assessment incorporated within ES Chapter 12: Population and Human Health [REP4-004] for the following reasons:

Change One:

- 3.9.6. Shifting the new link road to the north by a distance of approximately 14 metres would allow the proposed shared use cycle track and new permissive bridleway to follow the new aligned carriageway before sloping to the south to join the

existing permissive bridleway. This minor re-alignment of the shared use cycle track would result in only a negligible change in journey length for pedestrians and cyclists when compared to the distances reported in ES Chapter 12: Population and Human Health [REP4-004]. As such, Design Change One would not change the findings and conclusions of the ES in respect of the residual effects on WCHR.

Change Two:

- 3.9.7. A modification to the alignment of the access road serving Sacrewell Farm would result in only a negligible change in journey length for pedestrians and cyclists when compared to the distances reported in ES Chapter 12: Population and Human Health [REP4-004]. As such, Design Change Two would not change the findings and conclusions of the ES in respect of the residual effects on WCHR.

Change Three:

- 3.9.8. The new shared use cycle track to be provided as part of the Scheme would have a slight beneficial residual effect on WCHR. Although the cycle track would be shortened to improve safety for cyclists, the residual effect on WCHR would remain as slight beneficial and therefore the findings and conclusions of the ES in respect to the residual effects on WCHR remain unchanged.

Human health

- 3.9.9. No changes to access to healthcare facilities; between communities; to recreation and education facilities or to green and open spaces. The proposed design changes also do not result in any change to the noise assessment. Positive changes in air quality have been identified at Sacrewell Farm as a result of Design Change Two. Users of a section along the Nene Way and at Sacrewell Farm would experience some visual benefits as a result of the changes, although these would be minor. Some minor improvements have been identified, however these do not change the overall conclusion of impacts on health as outlined in ES Chapter 12: Population and Human Health [REP4-004].

3.10. Road, Drainage and Water Environment

Surface water and flood risk

- 3.10.1. The design changes would not result in any additional impacts on the surface water environment or increase flood risk during construction. No additional mitigation during construction is required above that proposed in ES Chapter 13: Road Drainage and the Water Environment [REP3-011] and the conclusion regarding the significance of effect remains unchanged.

- 3.10.2. There are no proposed changes to the highway drainage area resulting from Design Changes One and Two. Design Change Three would result in a reduction in drainage area, however, 'over the edge' drainage from cycle routes is not considered to pose a flood or pollution risk. Therefore, the embedded mitigation presented in ES Chapter 13: Road Drainage and the Water Environment [REP3-011] and Appendix 13.2: Drainage Strategy [REP5-007] remain unchanged and thus the conclusion regarding the significance of effect remains unchanged.

Groundwater

- 3.10.3. The proposed design changes do not alter the extent of proposed cuttings and/or embankments associated with the Scheme. As a result, there are no additional impacts predicted with regards to groundwater and particularly the likely dewatering requirements associated with the Sacrewell Farm access road. The current conclusions with respect to groundwater assessment remain as outlined in ES Chapter 13: Road Drainage and the Water Environment [REP3-011].
- 3.10.4. There are no amendments associated with the outlined proposed design changes that would alter the groundwater assessment during the operational period. Therefore, the conclusion in ES Chapter 13: Road Drainage and the Water Environment [REP3-011] regarding the significance of effect remains unchanged.

3.11. Climate

- 3.11.1. The design changes do not affect the findings and conclusions of ES Chapter 14: Climate [APP-052] and no alterations are required to this ES Chapter for the following reasons:
- 3.11.2. The proposed design changes are expected to lead to minor changes in the quantities of materials used and the cut-fill balance of earthworks. Some decisions will lead to a reduction in material use (e.g. shortening the cycle track at the east of the Scheme), but the requirement for a new section of footpath to compensate would lead to an increase in materials.
- 3.11.3. A change in material quantities will lead to a change in carbon emissions associated with the construction of the Scheme. However, the quantity change in materials is expected to be minor and therefore would not significantly change the carbon assessment associated with the Scheme's construction. It is anticipated that the changes in emissions would be minor (either positive or negative) and would not change the overall outcome of the assessment presented in ES Chapter 14: Climate [APP-052].

3.12. Cumulative Effects Assessment

- 3.12.1. The proposed design changes do not affect the findings and conclusions of ES Chapter 15: Cumulative Effects [**AS-018**] and no alterations are required to this ES Chapter for the following reasons:
- 3.12.2. The conclusions outlined in the Chapter for single project effects would not change from the original issue of the Chapter as the effects identified in the other technical Chapters have not changed. Therefore, there are no additional effects from these Chapters which would need to be considered in the cumulative assessment, to determine if there are single project effects.
- 3.12.3. The conclusions outlined for different project effects at the time of submission of the ES would not change from the original issue of the Chapter, assuming the same 'other developments' are within the Zone of Influence (ZOI) as when the assessment was carried out. The red line boundary is not increasing as a result of the design changes and therefore the ZOI is not required to increase. Therefore, there are no additional developments which would need to be considered in the cumulative assessment, to determine if there are different project effects.

3.13. Summary of findings

- 3.13.1. Table 1.1 summarises the design changes introduced during the examination and which ES Chapters require amendments as a result of each design change. In the summary, (✓) means amendments are required and (✗) means no amendments are required.
- 3.13.2. The findings and conclusions of each ES Chapter have been examined against each of the three design changes. As highlighted in Table 1.1, all of the design changes **do not** affect the findings and conclusions of the ES Chapters individually and in combination.

Table 1.1 ES Chapters findings and conclusions affected by the Design Changes

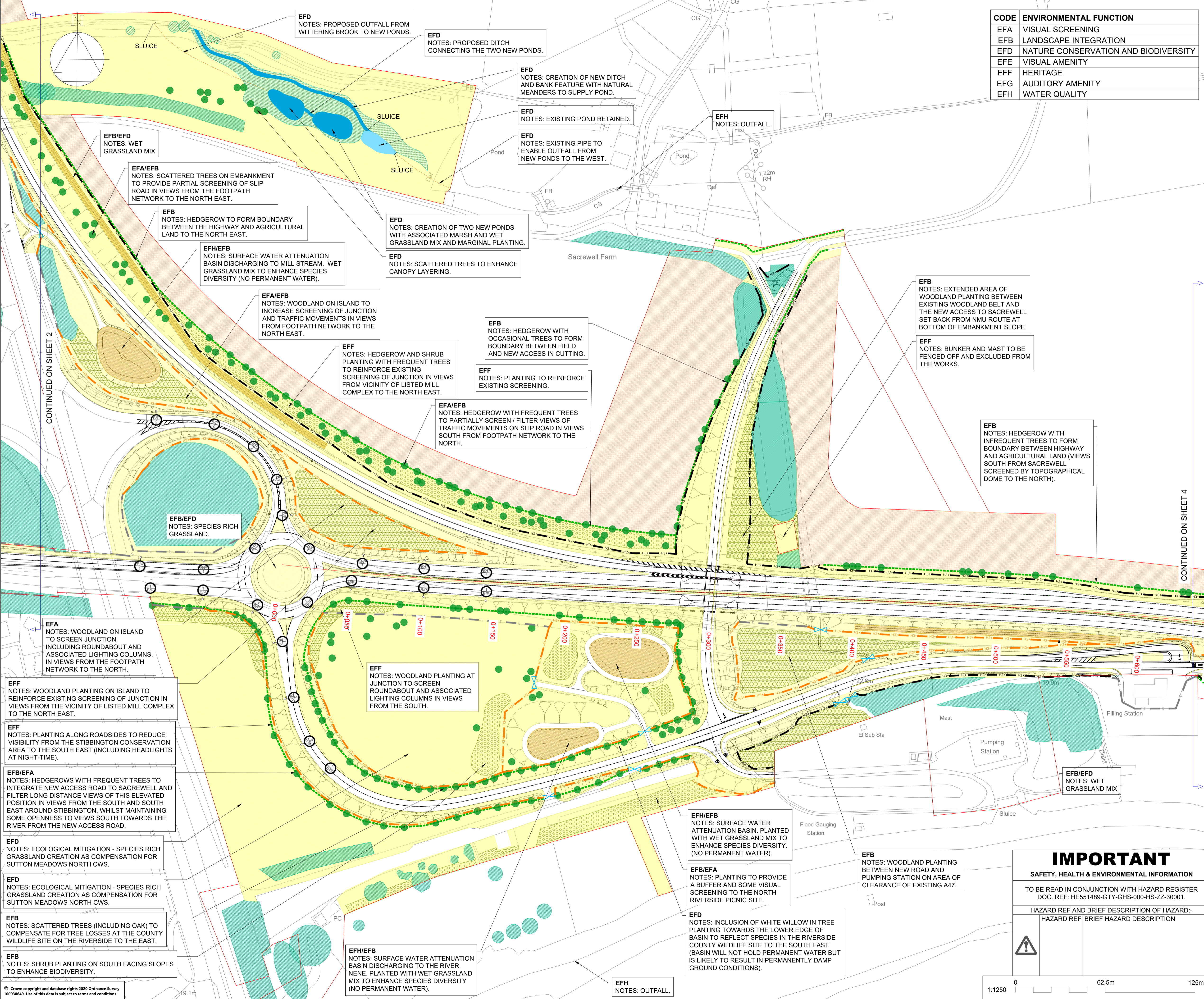
ES Chapters	Design Changes		
	Design Change One	Design Change Two	Design Change Three
Chapter 5 - Air quality [APP-043]	✗	✗	✗
Chapter 6 - Cultural Heritage [REP2-010]	✗	✗	✗
Chapter 7 - Landscape and Visual effects [APP-045]	✗	✗	✗
Chapter 8 - Biodiversity [AS-015]	✗	✗	✗
Chapter 9 - Geology and Soils [REP2-012]	✗	✗	✗
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]	✗	✗	✗

4. CONCLUSION

- 4.1.1. In summary, none of the findings and conclusions within the ES Chapters are affected as a result of the three design changes outlined in Section 2 of this ES Addendum One. Furthermore, it can also be concluded there are no new or different likely significant effects to the A47 Wansford to Sutton ES as a result of the design changes.
- 4.1.2. It is considered that the three design changes are minor, individually and cumulatively, and should therefore be viewed as non-material.

APPENDIX A: ENVIRONMENTAL MASTERPLAN

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NOTES

Purpose of use
FOR DCO SUBMISSION

Development Consent Order Number / Document
TR010039/APP/6.8

SHEET PLAN
SHEETS 1 - 7 (INCLUDES INSET A).

1. THESE PLANS SHOULD BE READ IN CONJUNCTION WITH OTHER PLANS AND DOCUMENTS IN THE DEVELOPMENT CONSENT ORDER.
2. ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE.
3. ONLY HEDGES WITHIN THE ORDER LIMITS ARE DISPLAYED ON THIS DRAWING SET.

KEY TO SYMBOLS

ORDER LIMITS	LE6.2 BANKS AND DITCHES
EXISTING VEGETATION TO BE RETAINED	LE6.4 MARSH AND WET GRASSLAND
EXISTING POND TO BE RETAINED	PROPOSED ENVIRONMENTAL ELEMENTS
EXISTING FENCE TO BE RETAINED	E2.1 ATTENUATION/INFILTRATION BASINS
EXISTING PARAPET TO BE RETAINED	E3.2.1 BADGER FENCING
EXISTING LIGHTING COLUMN TO BE RETAINED	E3.2.2 ENVIRONMENTAL FENCING
PROPOSED LANDSCAPE ELEMENTS	E3.2.3 PROPOSED PERMANENT WATER IN WILDLIFE PONDS AND DITCH
LE1.3 SPECIES RICH GRASSLAND	PROPOSED ELEMENTS - OTHER
LE2.1 WOODLAND	AGRICULTURAL LAND RESTORED
LE2.5 SHRUBS WITH INTERMITTENT TREES	HIGHWAYS FENCE (INDICATIVE)
LE4.3 NATIVE SPECIES HEDGEROWS	ANTI-GLARE FENCE (INDICATIVE)
LE4.4 NATIVE HEDGEROWS WITH TREES	PARAPET (INDICATIVE)
LE5.1 INDIVIDUAL TREES	LIGHTING COLUMN (INDICATIVE)

P01	04/08/21	FOR ISSUE	LS	PBlA	BJon
P02	30/05/22	DEADLINE 8	MHus	PBlA	RMea
P03	08/06/22	DEADLINE 8	MHus	PBlA	RMea
REV	DATE	REVISION NOTE	ORG	CHK'D	APP'D

DESIGNER

CONTRACTOR

CLIENT

PROJECT TITLE
A47 WANSFORD TO SUTTON DUALLING

PROJECT STAGE
PCF STAGE 4

DRAWING TITLE
ENVIRONMENTAL MASTERPLAN SHEET 3 OF 7

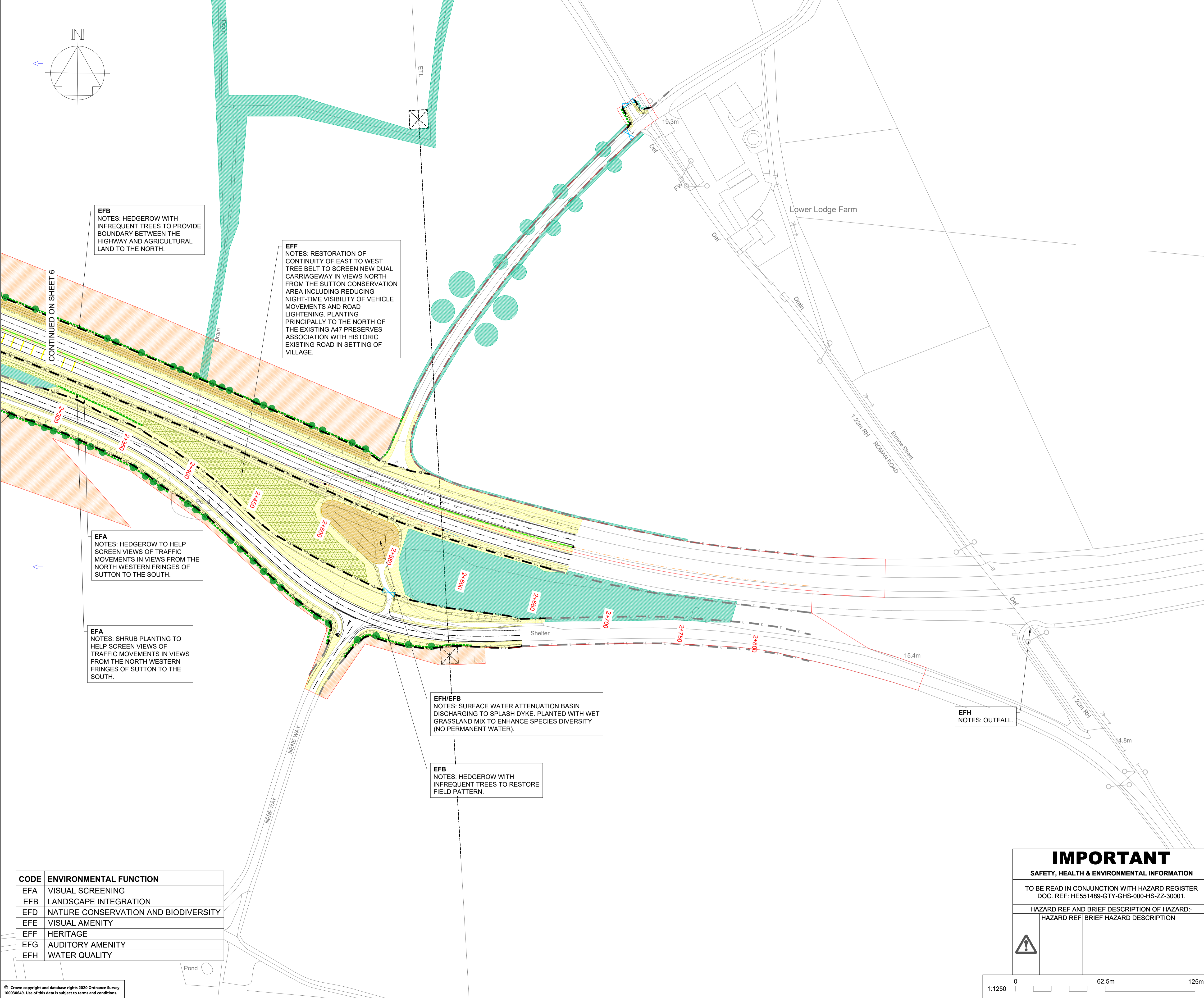
SUITABILITY
SUITABLE FOR STAGE APPROVAL

SHEET SIZE	SCALE	STATUS	REVISION
A1	1:1250	S4	P03

DRAWING NUMBER
HE551494-GTY-ELS-000-DR-LE-33003

IMPORTANT
SAFETY, HEALTH & ENVIRONMENTAL INFORMATION
TO BE READ IN CONJUNCTION WITH HAZARD REGISTER DOC. REF: HE551489-GTY-GHS-000-HS-ZZ-30001.
HAZARD REF AND BRIEF DESCRIPTION OF HAZARD:-
HAZARD REF | BRIEF HAZARD DESCRIPTION

1:1250 0 62.5m 125m



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KEY TO SYMBOLS

ORDER LIMITS	LE6.2 BANKS AND DITCHES
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EXISTING POND TO BE RETAINED	PROPOSED ENVIRONMENTAL ELEMENTS
EXISTING FENCE TO BE RETAINED	E2.1 ATTENUATION/INFILTRATION BASINS
EXISTING PARAPET TO BE RETAINED	E3.2.1 BADGER FENCING
EXISTING LIGHTING COLUMN TO BE RETAINED	E3.2.2 ENVIRONMENTAL FENCING
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P01	04/08/21	FOR ISSUE	LS	PBlA	BJon
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REV	DATE	REVISION NOTE	ORG	CHK'D	APP'D

DESIGNER

CONTRACTOR

CLIENT

PROJECT TITLE

A47 WANSFORD TO SUTTON DUALLING

PROJECT STAGE

PCF STAGE 4

DRAWING TITLE

ENVIRONMENTAL MASTERPLAN SHEET 7 OF 7

SUITABILITY

SUITABLE FOR STAGE APPROVAL

SHEET SIZE	SCALE	STATUS	REVISION
A1	1:1250	S4	P03

DRAWING NUMBER

HE551494-GTY-ELS-000-DR-LE-33007

CODE	ENVIRONMENTAL FUNCTION
EFA	VISUAL SCREENING
EFB	LANDSCAPE INTEGRATION
EFD	NATURE CONSERVATION AND BIODIVERSITY
EFE	VISUAL AMENITY
EFF	HERITAGE
EFG	AUDITORY AMENITY
EFH	WATER QUALITY

IMPORTANT
SAFETY, HEALTH & ENVIRONMENTAL INFORMATION

TO BE READ IN CONJUNCTION WITH HAZARD REGISTER DOC. REF: HE551489-GTY-GHS-000-HS-ZZ-30001.

HAZARD REF	BRIEF HAZARD DESCRIPTION

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