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Bramford to Twinstead Reinforcement

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17. Conclusion

17.1 Introduction

17.1.1 This chapter summarises the likely significant effects that are anticipated from the project as identified within the Environmental Statement (ES), the proposed additional mitigation and the likely residual effects following the implementation of the additional mitigation.

17.2 Likely Significant Effects

Construction

17.2.1 Table 17.1 summarises the potential for likely significant effects during construction. Where residual effects during construction are anticipated to be significant, these are highlighted in bold text. No significant effects have been identified for water environment, geology and hydrogeology, agriculture and soils and air quality during construction.

Table 17.1 – Likely Significant Effects during Construction

Description of Likely Significant Effect (pre-mitigation)	Scale and Duration (pre-mitigation)	Proposed Additional Mitigation	Residual Effect (post-mitigation)
Landscape and Visual			
Large scale construction activities associated with the 400kV underground cables in the landscape of the AONB affecting the natural beauty indicators of the AONB – notably scenic quality, relative wildness and relative tranquillity.	Short term major adverse	No mitigation proposed as it is not possible to mitigate these effects through landscape mitigation measures.	Short term major adverse. Neutral once construction is complete, and the working area reinstated.
Large scale construction activities associated with the 400kV underground cables and Stour Valley East CSE compound affecting the landscape within the Stour Valley SLA.	Short term moderate adverse	No mitigation proposed as it is not possible to mitigate these effects through landscape mitigation measures.	Short term moderate adverse. Neutral once construction is complete, and the working area reinstated.

Description of Likely Significant Effect (pre-mitigation)	Scale and Duration (pre-mitigation)	Proposed Additional Mitigation	Residual Effect (post-mitigation)
Large scale construction activities within the landscape of the following landscape character areas: LCA1, LCA5, LCA6 and LCA7.	Short term major or moderate adverse	No mitigation proposed as it is not possible to mitigate these effects through landscape mitigation measures.	Short term major or moderate adverse. Neutral once construction is complete, and the working area reinstated.
Large scale construction activities associated with the 400kV underground cables and CSE compound on the following community areas: Polstead, Leavenheath, Lamarsh and Alphamstone.	Short term moderate adverse	No mitigation proposed as it is not possible to mitigate these effects through landscape mitigation measures.	Short term moderate adverse. Neutral once construction is complete, and the working area reinstated.
Biodiversity			
Overhead line and underground cables: Habitat loss and modification / degradation of lowland mixed deciduous woodland Habitat of Priority Importance (HPI).	Long term moderate adverse	EIA_B01: Mitigation woodland creation (natural regeneration and planting), proposed at two locations connected to Hintlesham Woods: MM09 and MM10.	Neutral
Historic Environment			
<p>Archaeological Remains: Removal of, or damage to:</p> <ul style="list-style-type: none"> Former field boundaries on south-west side of A134 - AIM identifier: 1765 and the presence of Romano-British archaeology as evidenced from geophysical survey and archaeological trial trenching; Archaeological remains associated with a Romano-British settlement site east of St Edmund's Hill (B1508); and Cropmark complex at Hill Farm House (MEX30154). 	Long term moderate adverse	Archaeological recording (preservation by record) as per the Archaeological Framework Strategy (application document 7.9) and Outline Written Scheme of Investigation (application document 7.10).	Neutral

Description of Likely Significant Effect (pre-mitigation)	Scale and Duration (pre-mitigation)	Proposed Additional Mitigation	Residual Effect (post-mitigation)
Traffic and Transport			
Increase in amenity, fear and intimidation for walkers, cyclists and horse riders using Church Road, Twinstead.	Short term moderate adverse	EIA_TT01 Install warning signage prior to construction at Church Road, Twinstead to inform users of the road that construction traffic would be using it.	Short term minor adverse. Neutral once construction is complete.
Noise and Vibration			
Potential significant noise effects at 19 noise sensitive receptors (NSR) (seven due to daytime construction noise and 12 due to potential night working).	Short term moderate adverse	EIA_NV01 Additional temporary noise mitigation measures (site-specific best practicable means) would be put in place to reduce noise levels from construction plant and machinery at the 19 NSR, unless a detailed assessment is undertaken which demonstrates that no significant noise impacts would occur.	Short term neutral to minor adverse. Neutral once construction is complete.
Potential significant vibration effects at one property (Hill House Farm) from construction activities.	Short term moderate adverse	EIA_NV02 Additional temporary measures (site specific BPM) would be put in place to reduce vibration levels from construction plant and machinery at pylon 4Y004A, to the east of Hill House Farm, Burstall Hill (609110, 245633), unless a detailed assessment is undertaken which demonstrates that no significant vibration impacts would occur.	Short term neutral to minor adverse. Neutral once construction is complete.

Description of Likely Significant Effect (pre-mitigation)	Scale and Duration (pre-mitigation)	Proposed Additional Mitigation	Residual Effect (post-mitigation)
Cumulative Effects			
Potential significant cumulative effect to landscape and views immediately around Bramford Substation from the combination of the Bramford to Twinstead Reinforcement and East Anglia THREE (ID DCO-001).	Short term significant adverse	No mitigation proposed.	Short term significant adverse. Neutral once construction is complete, and the working area reinstated.
Potential significant cumulative effect to landscape and views from the combination of the Bramford to Twinstead Reinforcement and Stoke by Nayland Golf Course development (ID APP-BMSDC-025).	Short term significant adverse	No mitigation proposed.	Short term significant adverse. Neutral once construction is complete, and the working area reinstated.

Operation

17.2.2 Table 17.2 summarises the potential for likely significant effects during operation. Where residual effects during operation are anticipated to be significant, these are highlighted in bold text. No significant effects have been identified for biodiversity, water environment, geology and hydrogeology, agriculture and soils, traffic and transport, air quality and noise and vibration during operation.

Table 17.2 – Likely Significant Effects During Operation

Description of Likely Significant Effect (pre-mitigation)	Scale and Duration (Pre-mitigation)	Proposed Additional Mitigation	Residual Effect (Post-mitigation)
Landscape and Visual			
Beneficial effects associated with removal of existing 132kV overhead line (and underground cables) on Dedham Vale AONB.	Long term moderate beneficial	No mitigation proposed as significant effect is beneficial.	Long-term moderate beneficial

Description of Likely Significant Effect (pre-mitigation)	Scale and Duration (Pre-mitigation)	Proposed Additional Mitigation	Residual Effect (Post-mitigation)
Introduction of a new overhead line to the north of Ramsey Wood on LCA 2.	Long term moderate adverse	No mitigation proposed, effects from the introduction of the proposed 400kV overhead line to the north of Ramsey Wood cannot be mitigated.	Long term moderate adverse
Beneficial effects associated with removal of the existing 132kV overhead line (and underground cables) on LCA5 (5c and 5d) and LCA7.	Long term moderate beneficial	No mitigation proposed as significant effect is beneficial.	Long term moderate beneficial
Introduction of a new overhead line on the views from community area at Burstall.	Long term moderate adverse	No mitigation proposed on the overall community area, as effects from the introduction of the proposed 400kV overhead line cannot be fully mitigated. EIA_LV01: Proposed woodland and scrub planting at Bramford Substation (MM01) would benefit properties on Church Lane by filtering views of the substation.	Long term moderate adverse
Introduction of a new overhead line on the views from community area at Hintlesham.	Long term moderate adverse	No mitigation proposed on the overall community area, as effects from the introduction of the proposed 400kV overhead line cannot be fully mitigated. EIA_LV02: Proposed hedgerow planting (MM06) would benefit properties along the A1071 by filtering views of the new 400kV overhead line.	Long term moderate adverse
Beneficial effects associated with the removal of the existing overhead lines on the views from community areas at Chattisham, Lamarsh and Polstead.	Long term moderate beneficial	No mitigation proposed as significant effect is beneficial.	Long-term moderate beneficial

Description of Likely Significant Effect (pre-mitigation)	Scale and Duration (Pre-mitigation)	Proposed Additional Mitigation	Residual Effect (Post-mitigation)
Cumulative Effects			
Inter-project cumulative effects for landscape and visual immediately around Bramford Substation from the combination of the Bramford to Twinstead Reinforcement, East Anglia THREE (ID DCO-001) (until year 20) and East Anglia GREEN (ID DCO-019).	Significant long term adverse	No mitigation proposed.	Significant long-term adverse
17.2.3 The additional mitigation outlined in Table 17.1 and 17.2 are secured within the management plans submitted as part of the application for development consent. Further details can be found in ES Chapter 16: Environmental Management and Mitigation (application document 6.2.16).			

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