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Executive Summary

National Grid Electricity Transmission plc ('the Applicant') has made an application for development consent to reinforce the transmission network between Bramford Substation in Suffolk, and Twinstead Tee in Essex. The Bramford to Twinstead Reinforcement ('the project') would be achieved by the construction and operation of a new 400 kilovolt (kV) electricity transmission line over a distance of approximately 29km (18 miles), the majority of which would follow the general alignment of the existing overhead line network.

This Applicant's Response to the Rule 9 Letter has been produced in response to a Procedural Decision made by the Examining Authority pursuant to Rule 9 of The Infrastructure Planning (Examination Procedure) Rules 2010 dated 24 July 2023 (the 'Rule 9 Letter').

The Rule 9 Letter requests that the Applicant reviews the Environmental Statement (ES) and wider supporting environmental information that was submitted with the application and draws together and submits a comprehensive, topic-by-topic schedule of any environmental information that is still to be provided in relation to the Applicant's proposals to construct as part of the project a 4km temporary access route off the A131, near Little Maplestead (the 'temporary access route') and also a timetable setting out how and when any outstanding environmental information relating to the proposed temporary access route will be submitted prior to the Examination.

The Applicant has reviewed the application and can confirm that there is no outstanding environmental information relating to the temporary access route required to support the application for development consent and hence no impediment to the Examination beginning.

Whilst further surveys are proposed in order to verify the existing baseline data and to support pre-construction activities, including detailed design, the results of these surveys are not expected to change the proposed Order Limits, the outline design contained within the application, or the conclusions reached in the ES regarding the assessment of likely significant effects.

The Applicant would be pleased to agree with the Examining Authority the most appropriate format and timetable for the publication of this additional survey information during the Examination.

However, and for the avoidance of doubt, the Applicant does not consider that this further survey information is required to be published prior to the commencement of the Examination. In the Applicant's opinion, the application for development consent is already sufficiently complete to enable the Examination to begin.

1. Introduction

1.1 Overview and Purpose of this Report

- National Grid Electricity Transmission plc (here on referred to as 'the Applicant') has made an application for development consent to reinforce the transmission network between Bramford Substation in Suffolk, and Twinstead Tee in Essex. The Bramford to Twinstead Reinforcement ('the project') would be achieved by the construction and operation of a new 400 kilovolt (kV) electricity transmission line over a distance of approximately 29km (18 miles), the majority of which would follow the general alignment of the existing overhead line network.
- This report (referred to as 'the Applicant's Response to the Rule 9 Letter') has been produced in response to a Procedural Decision made by the Examining Authority pursuant to Rule 9 of The Infrastructure Planning (Examination Procedure) Rules 2010 dated 24 July 2023 (the 'Rule 9 Letter').
- The Rule 9 Letter requests that the Applicant reviews the Environmental Statement (ES) and wider supporting environmental information that was submitted with the application and draws together and submits a comprehensive, topic-by-topic schedule of any baseline description, field survey information and impact assessment that is still to be provided in relation to the Applicant's proposals to construct a 4km temporary access route off the A131, near Little Maplestead (the 'temporary access route'). This information is provided in Chapter 3 of the Applicant's Response to the Rule 9 Letter.
- For transparency, the review of the ES and signposting to the relevant baseline information is provided in Appendix A of the Applicant's Response to the Rule 9 Letter. Chapter 3 concludes that there is no outstanding environmental information required to be submitted by the Applicant prior to the start of Examination. Whilst future verification surveys remain to be carried out (to which see Chapter 3 of the Applicant's Response to the Rule 9 Letter), these surveys are not anticipated to change the conclusions of the assessment already presented within the ES.
- The Rule 9 Letter also requests the provision by the Applicant of a timetable setting out how and when any outstanding information relating to the proposed temporary access route will be submitted prior to the Examination. As already noted, Chapter 3 of the Applicant's Response to the Rule 9 Letter confirms that there is no outstanding information required to be submitted by the Applicant prior to the start of Examination. However, for transparency, a timetable for the publication of the results of future verification surveys is suggested in Chapter 3 of the Applicant's Response to the Rule 9 Letter. The Applicant would be pleased to agree with the Examining Authority the most appropriate format and timetable for the publication of this additional survey information during the Examination.
- The Rule 9 Letter requests that the response should also detail how any amendments, updates or additional information would be submitted, and identify any legacy references to further surveys being necessary. The Applicant's Response to the Rule 9 Letter confirms that there is no outstanding information required to be submitted by the Applicant prior to the start of Examination and that the future verification surveys are not anticipated to change the assessment within the ES and application. Therefore, the Applicant is not anticipating the need to update any application documents.

2. Background and Context

2.1 Identification of the Temporary Access Route

- 2.1.1 Construction of the project requires cable drums to be delivered to the Stour Valley West cable sealing end compound. Due to the size of the cable drums, these need to be delivered as abnormal indivisible loads.
- The need for a temporary access route off the A131 was identified through the Applicant's pre-application assessment of the local road network. This included; a desk study review of the local road network to assess the suitability for abnormal indivisible loads and heavy goods vehicles (HGV); a transport feasibility study, undertaken by transportation specialists Wynns in 2012 and 2022, to investigate the availability of suitable routes for cable drum delivery vehicles to where they are required on the project; and swept path analysis, which highlighted that a number of modifications would be required to the existing local road network.
- The need for a temporary access route off the A131 was also informed by consultation feedback and was consulted on at the targeted consultation in autumn 2022. Further details can be found in the Consultation Report [APP-043].
- Discussions have also been held with Essex Highways, which has indicated that a temporary ghost island is likely to be required on the A131 during construction to allow construction vehicles to safely leave the A131 onto the temporary access route due to the traffic flows and speed of the road.

2.2 Description of the Temporary Access Route

- The temporary access route forms part of the Applicant's application for development consent, which was submitted in April 2023. The temporary access route is shown on sheets 28 to 30 on Figure 4.1 in the ES Figures [APP-145].
- The temporary access route is approximately 3.8km long (between the A131 and Henny Back Road). It is described in ES Chapter 4: Project Description [APP-072], in particular Paragraph 4.7.7 which states 'The local road network within Section G: Stour Valley comprises many narrow lanes and is unsuitable for HGV in many locations. Therefore, a 7m wide temporary access route (with 4m wide soil storage to the side and passing places) is proposed off the A131 to the north of Collins Road near Little Maplestead. The temporary access route would be used for the HGV access and the cable drum deliveries to the underground cable section to the west of the Ansell's Grove trenchless crossing. This would avoid the need for works to the local road network to widen and straighten corners, such as at Cripple Corner.'
- The temporary access route is also further described in the following paragraphs in ES Chapter 4: Project Description [APP-072]:
 - Paragraph 4.4.6: 'The main project works (including the overhead line removal, new overhead line and underground cable) would be constructed under the DCO, subject to consent, commencing in autumn 2024. In general, this would start with enabling works, such as setting up the main compound and temporary access routes (including the temporary bridges, culverts and bellmouths).'

- Paragraph 4.4.10: 'Some temporary access routes (including any temporary bridges, culverts and bellmouths) would be in place for the duration of construction (up to four years) to maintain access to the working area and to reduce the number of HGV using the local road network. However, temporary access routes would be removed where these are no longer required. Any stripped topsoil would be reinstated, and the temporary working areas would generally be reinstated to their former use as described within the CEMP (application document 7.5).'
- Paragraph 4.4.33: 'The temporary access route off the A131 may require modifications to the road to allow construction vehicles to safely turn in and out of the bellmouth. The project would also include the construction of temporary access points (see next sub-section) and potential repositioning of existing street furniture. Other than this, no other physical changes to the local road network have currently been identified. However, National Grid will continue to undertake discussions with the relevant highway authorities to confirm any works that may be required on the local road network.'
- Paragraph 4.4.68: 'Vegetation removed temporarily for construction activities would be reinstated at the end of the construction phase in the first available planting season. Hedgerows and woodland areas that have been coppiced would be allowed to regrow. Hedgerow gaps created for construction of the temporary access route, underground cable lengths and other areas would be replanted along with reinforcement planting along the surrounding hedgerow where appropriate.'
- 2.2.4 Where the temporary access route would cross watercourses and public rights of way this would be as per the methodology described in ES Chapter 4: Project Description [APP-072] in paragraphs 4.4.42 to 4.4.49.
- The application for development consent outlines the need for a temporary access route with temporary land take and temporary land use. However, the Applicant is requesting permanent land rights for the route in the event that major works to the electricity transmission network should be required in the future. Whilst the Applicant considers this unlikely, and it is not planned for routine maintenance and repair, the Applicant is seeking to retain the right to access this route given the importance of ensuring the integrity of the electricity transmission network.
- Although the Applicant is seeking a permanent easement, the access route itself would be temporary and would be removed at the end of the construction period and at the end of any subsequent periods of future use (if required). The Applicant would be required to reinstate the land to its original condition as described in the Construction Environmental Management Plan (CEMP) [APP-177], compliance with which is secured through Requirement 4 of the draft Development Consent Order (DCO) [APP-034].

2.3 Land Access

In common with other long linear infrastructure projects, the Applicant does not currently own or have existing agreements to access all land within the project Order Limits, including the land required for the temporary access route. Therefore, and notwithstanding the statutory survey powers available to it, the Applicant has sought to agree voluntary survey access with the relevant landowners in conjunction with, and in the period since, the publication of the proposed route as part of the targeted consultation carried out in September 2022.

2.3.2	The Applicant also took the decision to pause site surveys over winter 2022/23 as a result of feedback from landowners across the project, following an outbreak of avian flu in East Anglia.

3. Topic by Topic Review

3.1 Introduction

- Table 3.1 sets out the baseline information presented in the ES and other environmental documentation and whether additional survey work is proposed.
- As the Rule 9 letter requests a comprehensive response on a topic-by-topic basis the Applicant has also included a table in Appendix A, which outlines the relevant references to the baseline environment of the temporary access route made within the ES in relation to each topic chapter.

Table 3.1 – Schedule of Baseline and Proposed Surveys Relating to the Temporary Access Route

Topic	Data Used to Inform the Baseline and Assessment in the ES and Other Environmental Documents	Information Still to be Provided
Environmental S	tatement (Volume 6 of the Application for Development Consent)	
	The baseline and assessment presented within the ES [APP-074] are based on desk study information and site visits to publicly accessible viewpoints. This is a standard approach for landscape and visual assessments. All data has been gathered and no further surveys are proposed.	proposed.
ES Chapter 7 Biodiversity [APP-075]	The baseline habitat information presented within the ES [APP-075] is based on desk study information, including project data searches from the Local Records Centre covered this study area. High resolution aerial imagery (dated 2021) was used to support the baseline assessment. This showed that the temporary access route crosses arable fields with hedgerows as described in ES Appendix 7.1: Habitats Baseline Report [APP-109] and shown on Habitats of Protected Species and Important Habitats [APP-014]. Aerial imagery is often used as part of the baseline assessment on large projects where it can be disproportionate to survey the full extent compared to the value of data obtained.	Additional survey data is being collected to verify the baseline data presented in the ES. This is not expected to change the baseline information, the likely significant effects or other conclusions presented in the ES.
ES Chapter 8 Historic Environment [APP-076]	The baseline and assessment presented within the ES [APP-076] are based on desk study information, including data requests from the Historic Environment Record, and site visits e.g. from the curtilage of publicly accessible listed buildings. This is a standard approach for assessments on the historic environment. All data has been gathered and no further surveys are proposed. Due to the narrow width of the temporary access route, site surveys such as geophysical survey would give little context to the results obtained and therefore a watching brief has been proposed in the Outline Written Scheme of Investigation [AS-001] as a proportionate way to manage archaeology encountered prior to and during construction.	proposed.
ES Chapter 9 Water Environment [APP-077]	The baseline and assessment presented within the ES [APP-077] are based on desk study information using mapping data. The temporary access route crosses minor watercourses (based on Ordnance Survey (OS) mapping and data provided by the Environment Agency) that would not meet the criteria for site survey. Desk study is considered appropriate for the assessment based on the anticipated nature of effects and as the access route would be temporary. All data has been gathered and no further surveys are proposed.	proposed.

Topic	Data Used to Inform the Baseline and Assessment in the ES and Other Environmental Documents	Information Still to be Provided
	The baseline and assessment presented within the ES [APP-078] are based on desk study information using mapping data and records held by Braintree District Council and the Environment Agency. Desk study is considered appropriate for the assessment based on the anticipated nature of effects and as the access route would be temporary. All data has been gathered and no further surveys are proposed.	proposed.
	The baseline and assessment presented within the ES [APP-079] are based on desk study information using mapping data, including agricultural land classification (ALC) grades provided by the Department for Environment, Food and Rural Affairs (Defra). This is typical data used to support agriculture and soil assessments on large infrastructure projects, particularly in locations of temporary works. The Defra soil mapping shows that the ALC grade of the temporary access route is grade 2 and 3, which has been assumed to be best and most versatile (BMV) land for the purposes of the assessment.	Additional survey data is being collected to verify the ALC grade and to inform soil management during construction. As the ALC grade is already assumed to be BMV, the results of the site survey will not change the baseline
Traffic and	The baseline and assessment presented within the ES [APP-080] are based on desk study information using mapping data and also traffic counts taken at junctions on the local road. All data has been gathered and no further surveys are proposed.	
	The baseline and assessment presented within the ES [APP-081] are based on desk study information using mapping data and records held by Braintree District Council. Desk study is appropriate where there are no anticipated operational air quality effects. All data has been gathered and no further surveys are proposed.	proposed.
Noise and	The baseline and assessment presented within the ES [APP-082] are based on desk study information using mapping data and desk-based modelling using anticipated construction machinery to estimate construction noise. All data has been gathered and no further surveys are proposed.	proposed.
Other Environme	ntal Documentation	
Habitats Regulations Assessment Report [APP-057]	The baseline and assessment presented within the Habitats Regulations Assessment Report [APP-057] are based on desk study information and is discussed at a project-wide level. Desk study is considered appropriate for the assessment based on the anticipated nature of effects. All data has been gathered and no further surveys are proposed.	proposed.

Topic	Data Used to Inform the Baseline and Assessment in the ES and Other Environmental Documents	Information Still to be Provided
Statutory	The assessment presented within the Statement of Statutory Nuisance [APP-058] is based on desk study information and is discussed at a project-wide level. Desk study is considered appropriate for the assessment based on the anticipated nature of effects. All data has been gathered and no further surveys are proposed.	
Flood Risk Assessment [APP-059]	The baseline and assessment presented within the Flood Risk Assessment [APP-059] are based on desk study information and is discussed at a project-wide level. Desk study is considered appropriate for the assessment based on the anticipated nature of effects. All data has been gathered and no further surveys are proposed.	proposed.
Water Framework Directive Assessment [APP-060]	The baseline and assessment presented within the Water Framework Directive Assessment [APP-060] are based on desk study information and is discussed at a project-wide level. Desk study is considered appropriate for the assessment based on the anticipated nature of effects. All data has been gathered and no further surveys are proposed.	proposed.
Transport Assessment [APP-061]	The baseline and assessment presented within the Transport Assessment [APP-061] are based on desk study information using mapping data and also traffic counts taken at junctions on the local road. All data has been gathered and no further surveys are proposed.	
and Tourism	The baseline and assessment presented within the Socio-Economics and Tourism Report [APP-066] are based on desk study information and is discussed at a project-wide level. Desk study is considered appropriate for the assessment based on the anticipated nature of effects. All data has been gathered and no further surveys are proposed.	
Arboricultural Impact Assessment (AIA) [APP-067]	Whilst an Arboricultural Impact Assessment (AIA) is not a requirement under the relevant National Policy Statements or included in the list of documents necessary to support an application for a Development Consent Order, an AIA [APP-067] has been submitted on a voluntary basis as part of the Application. No arboricultural survey data is currently shown on Figure 1 of the AIA in relation to the temporary access route.	programmed for August 2023 and the information will be used to inform the reinstatement of the land following construction. If the AIA requires updating once the survey

3.2 Proposed Environmental Surveys

Biodiversity

- As noted in Table 3.1, the assessment presented in ES Chapter 7: Biodiversity [APP-075] is based on desk-based records and a review of high-resolution aerial photographs. Aerial photographic data is often used to support ecological baseline data for project covering large areas where it can be disproportionate to survey the full extent compared to the value of data obtained. This is particularly the case where there are large areas of similar habitat types, ecologically low value habitats and also where there are seasonal limitations or where there are land access difficulties that restrict full coverage.
- A UK Habitats Survey, arboricultural survey and hedgerow survey will be undertaken in August 2023 (subject to landowner access being granted) to verify the habitat baseline data obtained from the high-resolution aerial imagery and to inform detailed design and construction methodology (in accordance with the DCO requirements and management plans) and reinstatement of the land following construction. The results of these surveys are not anticipated to change the assessment or conclusions presented in ES Chapter 7: Biodiversity [APP-075], as the high-resolution aerial photographs have shown that the habitat is primarily arable and the Important Hedgerow Assessment [APP-115] has assumed a worst case that hedgerows are important in the absence of survey information.
- The habitat survey would be supported by protected species surveys for badgers and bats to inform the detailed information presented in the final European Protected Species licences submitted to Natural England pre-construction should development consent be granted.

Agriculture and Soils

- As noted in Table 3.1, the assessment presented in ES Chapter 11: Agriculture and Soils [APP-079] is based on desk-based Defra mapping to identify the ALC grade. A soil survey is proposed in August 2023, which would verify the ALC grade. The results of the survey would also be used to inform soil management during construction, as set out within Chapter 11 of the CEMP [APP-177], which is secured through Requirement 4 of the draft DCO [APP-034].
- The assessment presented in ES Chapter 11: Agriculture and Soils [APP-079] currently assumes that the temporary access route is located on BMV land (i.e. ALC grades 3 and above). Therefore, the results of the soil survey would not change the assessment or conclusions presented within the ES Chapter 11: Agriculture and Soils [APP-079].

3.3 Proposed Engineering Surveys

- Paragraph 2.1.2 of this Applicant's Response to the Rule 9 Letter outlines the engineering work that has been undertaken to inform the routing and decisions in relation the temporary access route.
- In common with other nationally significant infrastructure projects, detailed engineering site surveys would need to be undertaken by the main works contractor prior to construction, to inform the detailed design of the temporary access route and the construction methodology. This would include topographical surveys to inform the final level of the route, ground investigations to inform the thickness and type of material used

- and drainage surveys to inform the temporary drainage design and how field drains would be reinstated.
- This information is typically collected to support the detailed design of a project and the discharge of requirements and would not in the Applicant's experience be required as part of an application for development consent or during the Examination stage.
- In any event, the Applicant does not consider that the results of the engineering surveys would affect the proposed Order Limits or routing of the temporary access route. The final temporary access route would be built within the parameters of the DCO, as assessed in the ES and controlled by the relevant requirements and management plans. Therefore, the Applicant does not consider that this information is required to support the application or as part of the Examination.

3.4 Timetable For Further Survey Work

- As outlined in Table 3.1, further surveys are only being undertaken to verify the baseline information that is already presented in the ES. The results of the survey work are not anticipated to change the assessment or conclusions of the ES and therefore these would not require updating following the conclusion of the surveys.
- For transparency, the Applicant has set out the timetable for the proposed verification survey work in Table 4.1. This would be subject to landowner consent (for example, requests to avoid crops prior to harvest) and suitable site conditions (for example surveys would not take place during poor weather conditions when there could be a risk to the safety of surveyors and quality of the survey data collected). This information is provided for information, as the results are not considered necessary to inform the Examination.
- The Applicant would be pleased to agree with the Examining Authority the most appropriate format and timetable for the publication of this additional survey information during the Examination if considered necessary.

Table 4.1 – Timetable For Outstanding Data Collection

Survey of Temporary Access Route Off A131	Indicative Dates for Survey	
Environmental surveys (to validate baseline and inform detailed design and construction planning)		
UK Habitat Survey	August 2023	
Hedgerow survey	August 2023	
Ground based bat roost survey	August 2023	
Badger survey	August 2023	
Agricultural Land Classification soil survey	August 2023	
Arboricultural (tree) survey	August 2023	
Engineering surveys (to inform detailed design and disch	arge of requirements)	
Detailed survey of highway accesses and visibility	Post Examination / Pre-construction	
Topographical survey to inform detailed design	Post Examination / Pre-construction	
Ground investigations to inform detailed design	Post Examination / Pre-construction	
Drainage Survey to inform detailed design	Post Examination / Pre-construction	

4. Conclusion

- As noted in Chapter 3 of the Applicant's Response to the Rule 9 Letter, the assessment presented within the ES is based on sufficient baseline information and the Applicant can confirm that no further environmental information needs to be gathered or submitted to support the application for development consent or Examination.
- The verification surveys proposed in August 2023 will be used to confirm the baseline already presented in the ES (namely ES Chapter 7: Biodiversity [APP-075] and ES Chapter 11: Agriculture and Soils [APP-079]) and to inform detailed design, construction methodology and site reinstatement. The survey results are not anticipated to change the assessment and conclusions presented within the ES.
- For transparency, the Applicant intends to collate the verification survey data into a factual baseline report with supporting figures, which can be submitted into Examination at an appropriate deadline. However, the Applicant can confirm that this data is not anticipated to change the assessment or conclusions of the ES or associated environmental documents, including the management plans.
- For the avoidance of doubt, and in the Applicant's opinion, the application for development consent for the project is already sufficiently complete to enable the Examination to begin.

Appendix A: References to Baseline Information in the ES

Topic	Location of Information in the ES Relating to the Temporary Access Route
Alternatives Considered	
Alternative options considered for construction routes	The environmental considerations of the different options considered for construction access are described in Table 3.15 in ES Chapter 3: Alternatives Considered [APP-071] and are shown on Sheet 6 of Figure 3.3 [APP-145]. Alternatives for the temporary access routes as a whole are also described in ES Appendix 4.1: Good Design [APP-090] in paragraph 2.4.3 to 2.4.6, including the fourth bullet of paragraph 2.4.3 which specifically references the temporary access route off the A131.
Landscape and Visual	
Landscape designations	The temporary access route is located partly within the Stour Valley Project Area (SVPA). The baseline for the SVPA is described in paragraph 6.5.5 of ES Chapter 6: Landscape and Visual [APP-074]. Further details regarding the baseline for the SVPA can be found in Sections 2.2, 2.3 and 4.2 of ES Appendix 6.2 Annex A: Dedham Vale AONB Approach and Identification of Setting Study [APP-099]. Landscape designations in Sections G and H are shown on Sheet 3 of Figure 6.1 [APP-146].
Landscape character	The landscape character areas (LCA) for Sections G and H are described in ES Chapter 6: Landscape and Visual [APP-074] paragraphs 6.5.22 to 6.5.23, and 6.5.24, respectively. The temporary access route lies within LCA 8: Essex B3 Blackwater and Stour Farmlands which is described in Section 3.8 of ES Appendix 6.3: Assessment of Effects on Landscape Character [APP-100]. The LCA in Sections G and H are shown on Sheet 3 of Figure 6.5 [APP-146].
Views	Existing views within Sections G and H are described in ES Chapter 6: Landscape and Visual [APP-074] paragraphs 6.5.53 to 6.5.62, and 6.5.63 to 6.5.66, respectively. The temporary access route passes through the parishes of Alphamstone, Little Maplestead, Pebmarsh, Twinstead and Wickham St Paul which are described in Sections 2.2, 2.22, 2.26, 2.33 and 2.35 respectively in ES Appendix 6.5: Assessment of Visual Effects on Communities [APP-108]. Visual receptors and viewpoints within Sections G and H are shown on Sheet 3 of ES Figure 6.6 [APP-146].
Biodiversity	
Statutory designated sites	There is one statutory designated site in Section G, this is Cornard Mere, Little Cornard Site of Special Scientific Interest (SSSI). It is located over 4km away from the temporary access route and is described in Table 3.2 of ES Appendix 7.1: Habitats Baseline Report [APP-109] and in paragraph 7.5.3 in ES Chapter 7: Biodiversity [APP-075]. Sheet 2 of ES Figure 7.1.1 [APP-147] shows statutory designated sites for biodiversity in Sections G and H.
Non-statutory designated sites	Table 3.5 of ES Appendix 7.1: Habitats Baseline Report [APP-109] describes the non-statutory designated sites in Sections G and H. Table 7.5 of ES Chapter 7: Biodiversity [APP-075] lists the non-statutory designated sites in Sections G and H. The nearest non-statutory designated site is Twinsteadhall Wood, which is located approximately 100m to the north of the temporary access route. Sheet 3 of ES Figure 7.1.2 [APP-147] shows non-statutory designated sites for biodiversity in Sections G and H.

Topic	Location of Information in the ES Relating to the Temporary Access Route
UK Habitat Classification	Paragraphs 3.4.12 and 3.4.13 of ES Appendix 7.1: Habitats Baseline Report [APP-109] describe the UK Habitat Classification areas within Sections G and H, respectively. Sheets 12 and 14 of ES Figure 7.1.4 [APP-148] show the UK Habitat Classification survey results (areas) within the relevant sections of Sections G and H. Sheets 12 and 14 of ES Figure 7.1.5 [APP-148] show the UK Habitat Classification survey results (linear features). The habitat survey results for the temporary access route are based on a review of aerial photographs. The same habitat data is also shown on the Habitats of Protected Species and Important Habitats [APP-014]. A UK Habitat survey is proposed to verify the habitats assumed in the baseline based on the high-resolution aerial photographs (see Section 3.2 of the Applicant's Response to the Rule 9 Letter).
Importance (HPI) and Ground	Paragraph 3.3.1 of ES Appendix 7.1: Habitats Baseline Report [APP-109] identifies HPI within the Order Limits in Section G. The HPI is described in Table 3.7 of ES Appendix 7.1: Habitats Baseline Report [APP-109]. Sheets 17 and 19 of ES Figure 7.1.3 [APP-148] show HPI and GWDTE sites within the relevant sections of Sections G and H.
	Table 3.1 of ES Appendix 7.4: Ancient Woodland and PoAW Report [APP-114] lists ancient woodland and PoAW in Sections G and H. There is no ancient woodland or PoAW identified along the temporary access route off the A131. The nearest designated ancient woodland is Twinsteadhall Wood, which is located approximately 100m to the north of the temporary access route. Sheet 3 of ES Figure 7.4.1 [APP-149] shows ancient woodland and PoAW in Sections G and H.
Veteran and Ancient Trees	Table 5.1 of ES Appendix 7.4: Ancient Woodland and PoAW Report [APP-114] lists records of Veteran Trees. There are no records of Veteran Trees in Sections G and H. Sheet 3 of ES Figure 7.4.1 [APP-149] shows Ancient and Veteran Trees in Sections G and H. An arboricultural survey is not necessary to support an application for development consent. However, an arboricultural survey is proposed to inform the vegetation figures provided in Appendix A and B of the LEMP [APP-183 and APP-184] respectively (see Section 3.2 of the Applicant's Response to the Rule 9 Letter).
Important Hedgerows	Table 3.1 of ES Appendix 7.5: Important Hedgerow Assessment [APP-115] lists the hedgerows crossed by the temporary access route. The table notes that these have been assessed using desk study information and aerial photographs. As per the methodology set out in Section 2.3 of ES Appendix 7.5 [APP-115], where there was uncertainty regarding the status, a precautionary approach was taken and the hedgerows were defined as 'important' as shown on Sheets 11 and 13 of Figure 7.5.1 [APP-150] shows the Important Hedgerows in Sections G and H. A hedgerow survey is proposed to confirm the assumption (see Section 3.2 of the Applicant's Response to the Rule 9 Letter).
	Tables 3.10 and 3.12 of ES Appendix 7.1: Habitats Baseline Report [APP-109] describe the baseline for protected and notable plant species and important arable plant areas, respectively. Sheets 5 and 6 of ES Figure 7.1.6 [APP-149] show notable botanical species and important arable plant assemblages in Sections G and H based on the desk study. There are no desk study records of important arable plant species along the temporary access route.
Invasive Non-Native Species (INNS)	Table 3.11 of ES Appendix 7.1: Habitats Baseline Report [APP-109] describes the baseline for INNS, including within Sections G and H. Sheet 3 of ES Figure 7.1.7 [APP-149] shows INNS recorded in Sections G and H based on the desk study. There are no desk study records of INNS along the temporary access route.

Topic	Location of Information in the ES Relating to the Temporary Access Route
Watercourses and Aquatic Habitats	There are no main rivers crossed by the temporary access route off the A131. There is no baseline information presented for the minor watercourses and ditches crossed by the temporary access route within the ES. A UK Habitat survey is proposed to verify the habitats assumed in the baseline and would include recording of aquatic habitats (see Section 3.2 of the Applicant's Response to the Rule 9 Letter).
Protected and Notable Species	The following ES Figures show the baseline for protected and notable species in Sections G and H based on desk based information. ES Appendix 7.2: Species Baseline Report [APP-112] describes the general habitats across the Order Limits where protected species are likely to be present:
	 Otter and water vole: The desk study results are shown on Sheet 3 of ES Figure 7.2.1 [APP-149];
	 Schedule 1 bird species: The desk study results are shown on Sheet 3 of ES Figure 7.2.5 [APP-149];
	 Reptile habitat suitability: The desk study results are shown on Sheet 3 of ES Figure 7.2.6 [APP-149];
	 Terrestrial invertebrates habitat suitability: The desk study results are shown on Sheet 3 of ES Figure 7.2.7 [APP-149];
	 Other notable species: The desk study results are shown on Sheet 3 of ES Figure 7.2.8 [APP-149];
	• Bats: The desk study results are shown on Figure 7.7.1 and Figure 7.7.2 [APP-150]. The habitat suitability modelling results are shown on Sheet 1 of 1 and Sheet 5 of Figures 7.7.5 to 7.7.12 [APP-150] and also Figure 7.7.13 [APP-151].
	• Dormouse: The desk study and habitat suitability assessment results are shown on Sheet 3 of Figure 7.8.1 [APP-151].
	• Badger: The desk study results are shown on Sheet 11 and 13 of Figure 7.9.1 in ES Appendix 7.9: Badger Survey Report [APP-121].
Historic Environment	
Archaeological Remains	ES Appendix 8.1: Historic Environment Baseline [APP-125] provides a full list of archaeological assets recorded within the study area based on desk study information. The nearest scheduled monument is Roman villa south of Alphamstone church (ref 1011807) located approximately 950m to the east of the temporary access route. Sheets 11 and 13 of ES Figure 8.1 [APP-151] show the archaeological sites identified in the baseline in Sections G and H.
Built Heritage Assets	ES Appendix 8.1: Historic Environment Baseline [APP-125] provides a full list of built heritage assets within the study area based on desk study information. There are no Grade I or Grade II* listed buildings near the temporary access route. There are a number of Grade II listed buildings, which are situated along the local road network near the temporary access route. These include Charity Cottage and Hope Cottage near Cripple Corner. Sheet 4 of ES Figure 8.2 [APP-151] show the built heritage asset baseline in Sections G and H.
Historic Landscape	ES Appendix 8.1: Historic Environment Baseline [APP-125] provides a list of historic landscapes within the study area provided by Essex County Council. Sheets 11 and 13 of ES Figure 8.3 [APP-152] show the historic landscape baseline in Sections G and H.

Topic	Location of Information in the ES Relating to the Temporary Access Route
Water Environment	
Water Environment Features	Sheet 3 of ES Figure 9.1 [APP-153] shows water environment features within Sections G and H. These features are described in Section 9.5 of ES Chapter 9: Water Environment [APP-077]. Details on the existing consented surface water discharges in Section G and H can be found in Table 2.1 of ES Appendix 9.1: Water Environment Baseline [APP-129]. The nearest active discharges to surface watercourses are located approximately 150m south-west of the temporary access route in Little Maplestead, Halstead. The nearest licensed abstraction is at Kings Farm, Pebmarsh, approximately 300m south of the temporary access route.
Water Framework Directive (WFD) Waterbodies	Sheet 3 of ES Figure 9.2 [APP-153] shows water environment features within Sections G and H. These features are described in Section 9.5 of ES Chapter 9: Water Environment [APP-077]. The temporary access route is partially located within the Essex Gravels WFD groundwater waterbody. The nearest WFD surface waterbody is the Pebmarsh Brook, approximately 600m south of the temporary access route.
Geology and Hydrogeology	
Geology	The geology of the temporary access route is described in the baseline for Section G and H in paragraphs 2.3.15 to 2.3.27 and Table 2.8 of ES Appendix 10.1: Geology Baseline and Preliminary Risk Assessment [APP-130]. The relevant superficial geology is shown on Sheet 3 of Figure 10.1 [APP-153]. The relevant bedrock geology is shown on Sheet 3 of Figure
	10.2 [APP-153]. There are no statutory designated sites for geological importance within 1km of the Order Limits (e.g. Sites of Special Scientific Interest designated for their geological importance).
Mineral reserves	The minerals baseline for Section G and H is described in paragraphs 3.2.3 to 3.2.7 of the ES Appendix 10.3: Minerals Resource Assessment [APP-132]. The relevant mineral reserves are shown on Sheet 3 of Figure 10.3 [APP-153]. The temporary access route is located within a mineral safeguarding area for sand and gravel.
Hydrogeology	The temporary access route overlies Lowestoft Formation and London Clay Formation as shown on Sheet 3 of Figure 10.1, 10.2 and 10.3 [APP-153]. These are both unproductive strata in terms of hydrogeology as described in paragraph 2.2.2. in ES Appendix 10.2 Groundwater Baseline and Assessment [APP-131]. Existing groundwater abstractions along the temporary access route are shown on Sheet 3 of Figure 10.1, 10.2 and 10.3 [APP-153] and listed in Tables 2.4, 2.5 and 2.6 of ES Appendix 10.2 Groundwater Baseline and Assessment [APP-131].
Contaminated land	No land with a potentially contaminated former use has been identified along the temporary access route through a search of desk records, as evidenced in ES Appendix 10.1: Geology Baseline and Preliminary Risk Assessment [APP-130] and as shown on Sheet 3 of Figure 10.5 [APP-153].

Topic	Location of Information in the ES Relating to the Temporary Access Route
Agriculture and Soil	
Soil type	The baseline soil type for the whole project is described in paragraphs 11.5.1 to 11.5.2 of ES Chapter 11: Agriculture and Soils [APP-079]. The relevant soilscape mapping for the temporary access route is shown on Sheet 3 of ES Figure 11.1 [APP-153].
Agricultural land classification (ALC)	The ALC grades and climatic information for the whole project are described in paragraphs 11.5.3 to 11.5.8 of ES Chapter 11: Agriculture and Soils [APP-079] and is based on desk based information. The relevant provisional ALC mapping (using Defra mapping) is shown on Sheet 3 of ES Figure 11.2 [APP-153]. The temporary access route crosses Grade 2 and Grade 3 (undifferentiated) ALC grade land.
Land use	The land use for the whole project is summarised in paragraphs 11.5.9 to 11.5.13 of ES Chapter 11: Agriculture and Soils [APP-079] based on desk based information. Parts of the temporary access route cross land parcels are under Countryside Stewardship. The relevant agrienvironmental scheme mapping and forestry scheme mapping is shown on Sheet 3 of ES Figure 11.4 and ES Figure 11.5 [APP-153] respectively.
Traffic and Transport	
Road network	The baseline environment for the road network for the whole project is described in paragraphs 12.5.1 to 12.5.4 of ES Chapter 12: Traffic and Transport [APP-080] including a list of the Protected Lanes in Section G and H (paragraph 12.5.4). The temporary access route crosses two Protected Lanes; Lorkins Lane (BTELANE85) and Henny Back Road (BTELANE86). Protected Lanes are shown on Sheet 11 and 13 of Figure 8.3 [APP-152]. Existing baseline traffic data was collected for the local road network, as shown on Sheet 3 of Figure 12.3 [APP-154].
Public rights of way (PRoW)	The baseline environment for the PRoW network for the whole project is described in paragraphs 12.5.5 to 12.5.14 of ES Chapter 12: Traffic and Transport [APP-080]. The temporary access route crosses one PRoW (FP 11 116). PRoW are shown on Sheet 3 of Figure 12.2 [APP-154].
Air Quality	
Background air pollutant concentrations	General air quality across the Order Limits is described in paragraphs 13.5.1 to 13.5.3 in ES Chapter 13: Air Quality [APP-081]. Background air pollutant concentrations for Sections G and H are listed in Table 13.1 of ES Chapter 13: Air Quality [APP-081].
Human receptors	Table 13.2 of ES Chapter 13: Air Quality [APP-081] provides cumulative banded human receptors in Sections G and H. The relevant human receptors are shown on Sheets 11 and 13 of ES Figure 13.1 [APP-154].
Ecological receptors	Table 13.3 of ES Chapter 13: Air Quality [APP-081] lists the nearest ecological receptors in Sections G and H. The relevant ecological receptors are shown on Sheets 11 and 13 of ES Figure 13.1 [APP-154]. The nearest ecological receptor to the temporary access route is Twinsteadhall Wood Local Wildlife Site, approximately 100m north of the Order Limits.

Topic	Location of Information in the ES Relating to the Temporary Access Route	
Noise and Vibration		
Noise and vibration	The existing baseline for the noise environment of the whole project is described in paragraphs 14.5.1 and 14.5.2 of ES Chapter 14: Noise and Vibration [APP-082]. The relevant noise baseline is shown on Sheets 11 and 13 of ES Figure 14.1 [APP-154]. The nearest noise important area (ID 12017) is located approximately 120m south-west of the temporary access route on the A131.	

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