The Great Grid Upgrade

BT-NG-020621-545-0232

Bramford to Twinstead Reinforcement

Volume 8: Examination Submissions

Document 8.5.12: Technical Note on Ancient and Potentinal Ancient Woodland

Final Issue A
October 2023

Planning Inspectorate Reference: EN020002

The Infrastructure Planning (Examination Procedure) Rules 2010
Regulation 8(1)(k)

nationalgrid

Page intentionally blank

Contents

Executive Summary

This Technical Note has been produced to provide supporting information to explain the rationale behind proposals and potential measures to reduce impacts on ancient or potential ancient woodland set out in Table 6.1 of the Landscape and Ecological Management Plan (LEMP) (**document 7.8 (B)**) in more detail. It has been produced in response to a request from Natural England during meetings held to discuss the Statement of Common Ground and based on the feedback received in the Natural England Relevant Representation [**RR-042**] and its Written Representation [**REP2-026/027**]. The Relevant Representation requested further clarifications on the following:

"Clarification that works beneath existing overhead line at Hintlesham Wood SSSI will be coppicing, rather than vegetation clearance.

Clarification is sought on why mitigation measures such as hand digging/ vacuum excavation are proposed within the 15m buffer around Hintlesham Little Wood (part of Hintlesham Woods SSSI) as this is not made clear in the documentation provided.

Application of Natural England's standing advice for ancient woodland, ancient trees and veteran trees should be applied and the implementation of the mitigation hierarchy reviewed for the following ancient woodland sites: Bushy Park Wood, Butler's Wood and Waldegrave Wood."

There are 12 areas of designated ancient woodland within or immediately adjacent to the Order Limits. Hintlesham Little Wood is the only one located within the Order Limits. All of the areas of designated ancient woodland have an additional nature conservation designation.

The site surveys identified three sites to contain indicator species and other features representative of ancient woodland origin and therefore are likely to be ancient woodland and are treated as such within the assessment. These are: PoAWS4 – Hintlesham Woods; PoAWS5 – a linear feature to the north of Hintlesham Woods; and PoAWS10 – Ansell's Grove.

The assessment presented in ES Chapter 7: Biodiversity [**APP-075**] has concluded that there are no likely significant residual effects in relation to designated ancient woodland or PoAWS during construction or operation. In addition, whilst the flexibility within the LoD may result in differences in the magnitude of impact, the sensitivity testing presented in Section 7.11 of ES Chapter 7: Biodiversity [**APP-075**] has shown that no new or different likely significant effects would occur to those identified in the baseline scenario assessed in Sections 7.6 to 7.10.

With regards to the works proposed near PoAWS4, Hintlesham Great Wood, Hintlesham Little Wood and Keeble's Grove where the Order Limits are within 15m of the ancient woodland/PoAWS, two additional commitments have been added to the Register of Environmental Actions and Commitments submitted at Deadline 3 (**document 7.5.2 (B)**) to make clear the Applicant's intentions at these locations:

- *'EM-AB15: No topsoil stripping is to be undertaken within 15m of the ancient woodland boundary at Hintlesham Little Wood and Hintlesham Great Wood. Temporary matting/trackway will be used where the temporary access route is located within 15m of PoAWS4, Hintlesham Great Wood and Hintlesham Little Wood to avoid compaction of the root protection area';* and
- *'EM-AB16: The temporary access route adjacent to Keeble's Grove will not be topsoil stripped in order to avoid impacts to the root protection area of this woodland.'*

1. Introduction

1.1 Background to the Project

1.1.1 The Overarching National Policy Statement (NPS) for Energy (EN-1) states that '*Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated. The IPC should not grant development consent for any development that would result in its loss or deterioration unless the benefits (including need) of the development, in that location outweigh the loss of the woodland habitat*' (paragraph 5.3.14, pg. 71).

1.1.2 Environmental Statement (ES) Appendix 7.4: Ancient Woodland and Potential Ancient Woodland Report [**APP-114**] sets out baseline information on ancient woodland, areas of potential ancient woodland, veteran trees and ancient trees within and adjacent to the Order Limits, gathered from desk study and field surveys. ES Chapter 7: Biodiversity [**APP-075**] considers the likely significant effects of the project during construction and operation on ancient woodland and potential ancient woodland sites (PoAWS).

1.1.3 The Applicant has set out a mitigation hierarchy for working near ancient woodland in Table 6.1 of the Landscape and Ecological Management Plan (LEMP) (**document 7.8 (B)**). This is based on the approach used on the Southampton to London Pipeline development consent order (DCO), which was a long linear project where Natural England agreed to the methodology and mitigation proposed.

1.2 Purpose of the Technical Note

1.2.1 This Technical Note has been produced to provide supporting information to further explain the proposed works at each location and to identify the need for any additional measures to reduce impacts on ancient or potential ancient woodland set out in Table 6.1 of the LEMP (**document 7.8 (B)**) in more detail. It has been produced in response to a request from Natural England during meetings held to discuss the Statement of Common Ground and based on the feedback received in the Natural England Relevant Representation [**RR-042**]. The Relevant Representation requested further clarifications on the following:

"Clarification that works beneath existing overhead line at Hintlesham Wood.' SSSI will be coppicing, rather than vegetation clearance.

Clarification is sought on why mitigation measures such as hand digging/ vacuum excavation are proposed within the 15m buffer around Hintlesham Little Wood (part of Hintlesham Woods SSSI) as this is not made clear in the documentation provided.

Application of Natural England's standing advice for ancient woodland, ancient trees and veteran trees should be applied and the implementation of the mitigation hierarchy reviewed for the following ancient woodland sites: Bushy Park Wood, Butler's Wood and Waldegrave Wood.

Natural England welcomes the Applicant's decision to implement the mitigation hierarchy which treats sites that the Applicant has considered to be potential ancient woodland as ancient woodland.'

1.2.2 The scope of the Technical Note is to provide a summary of all the locations where the Order Limits lie within 15m of ancient or potential ancient woodland and to describe the work proposed and any additional measures that have been identified to avoid potential adverse effects or to make clear the Applicant's intention with regards to the Order Limits at these locations.

1.2.3 The Applicant's Comments on Relevant Representations are provided in Deadline 1 Submission - Document 8.3.3: Applicant's Comments on Relevant Representations [**REP1-025**].

1.3 Standing Advice for Ancient Woodland

1.3.1 Natural England and the Forestry Commission have produced standing advice on ancient woodland, which has been used to inform this Technical Note. The standing advice states that '*For ancient woodlands, the proposal should have a buffer zone of at least 15 metres from the boundary of the woodland to avoid root damage (known as the root protection area). Where assessment shows other impacts are likely to extend beyond this distance, the proposal is likely to need a larger buffer zone. For example, the effect of air pollution from development that results in a significant increase in traffic.*' (Forestry Commission and Natural England, 2022).

1.3.2 As stated in Table 4.1 of the LEMP (**document 7.8 (B)**) '*any effects of the project in relation to other impacts, such as from traffic would be temporary, a 15m buffer is considered an appropriate buffer for avoiding impacts on ancient woodland on the project*'. In addition, the Arboricultural Impact Assessment (**document 5.10 (B)**) has identified RPAs, based on these, the 15m buffer is considered appropriate to limit effects on arboricultural features. Construction dust is assessed within ES Appendix 13.1: Dust Risk Assessment [**APP-135**]. This follows the process set out in guidance produced by the Institute of Air Quality Management and assesses the effects on sensitive ecological receptors including ancient woodland. The assessment concludes that with the adoption of good practice measures there are not expected to be any significant effects to ecological receptors (paragraph 3.4.1). The good practice measures are presented in the CoCP (**document 7.5.1 (B)**) and secured through Requirement 4 in the draft DCO (**document 3.1 (C)**). The assessment presented in ES Chapter 7: Biodiversity [**APP-075**] has concluded that there are no likely significant residual effects in relation to designated ancient woodland or PoAWS during operation.

1.3.3 Therefore, the Applicant considers that a 15m buffer is an appropriate buffer for avoiding impacts on ancient woodland on the project, as any effects of the project in relation to other impacts, such as from traffic would be temporary.

1.4 Structure of the Technical Note

1.4.1 The following chapters provide an overview of each of the 12 areas of designated ancient woodland (Chapter 2) and three areas of potential ancient woodland (Chapter 3) within or immediately adjacent to the Order Limits. They detail the areas, the proposed works in the vicinity of the areas, and the current commitments and residual effects as reported in the Register of Environmental Actions and Commitments (REAC) (**document 7.5.2 (B)**). They then consider whether additional commitments are required in those locations where a 15m buffer is not able to be implemented or in response to Natural England's Relevant Representation [**RR-042**].

1.4.2 This Technical Note focuses on the likely impact during construction only. ES Chapter 7: Biodiversity [**APP-075**] sets out the assessment of likely significant effects on ancient and potential ancient woodland during operation.

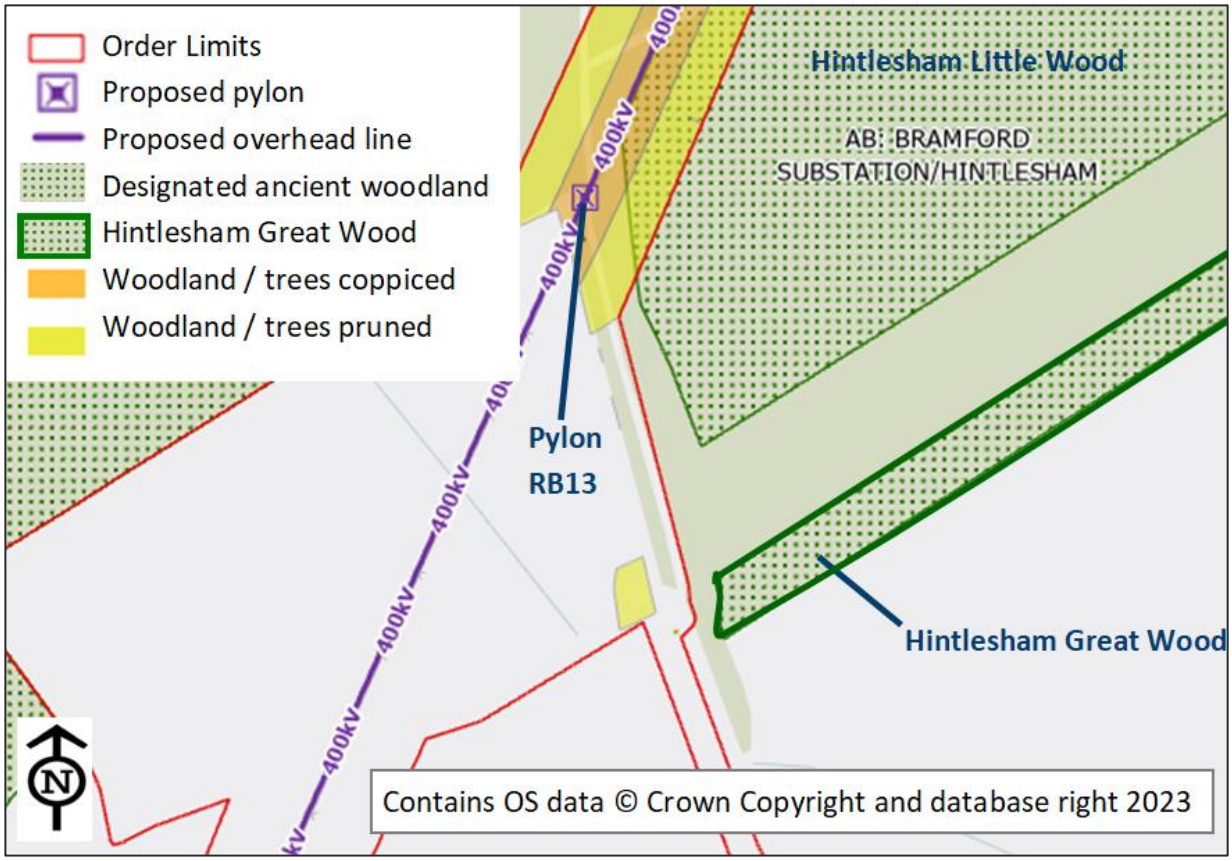
2. Designated Ancient Woodland

2.1 Hintlesham Woods SSSI – Hintlesham Great Wood (1117096)

Baseline Environment

2.1.1 Hintlesham Great Wood forms part of Hintlesham Woods SSSI in Section AB: Bramford Substation/Hintlesham. It lies approximately 300m north of Pond Hall Road and adjacent to the Order Limits and is shown with a green line around it in Figure 2.1. The majority of the woodland lies further than 15m from the Order Limits, however there is a short section that lies just within 15m. There is an existing farm access track (and public right of way) that runs alongside the eastern extent of the field adjacent to Hintlesham Great Wood, which has trees along both sides as is identified as PoAWS4 see Section 3.1 of this report for details.

Figure 2.1 - Hintlesham Great Wood



Proposed Works

2.1.2 The closest works within the Order Limits adjacent to Hintlesham Great Wood are associated with a temporary access route to pylon RB13 and the existing managed swathe through Hintlesham Woods. The works within the existing managed swathe are described under Hintlesham Little Wood. Given the nature of the works, access is only required by tractor or a light goods vehicle. No vegetation removal or management (such as pruning or coppicing) is assumed for Hintlesham Great Wood.

Commitments and Residual Effects

2.1.3 Whilst the Order Limits are approximately 10m from the edge of Hintlesham Great Wood at their closest, as stated in the LEMP (**document 7.8 (B)**), no impact is anticipated on Hintlesham Great Wood Ancient Woodland Inventory (AWI) site due to it being located further than 15m away from ground disturbing activities (the AWI is at a greater distance from the works that the woodland edge), including the temporary access route, which would be located to the west of the 15m buffer. Therefore, no specific commitments have been identified for Hintlesham Great Woods within the LEMP.

2.1.4 The Applicant has proposed a further commitment to make clear its intention with regards to the Order Limits at this location:

- EM-AB15: *'No topsoil stripping is to be undertaken within 15m of the ancient woodland boundary at Hintlesham Little Wood and Hintlesham Great Wood. Temporary matting/trackway will be used where the temporary access route is located within 15m of PoAWS4, Hintlesham Great Wood and Hintlesham Little Wood to avoid compaction of the root protection area'*.

2.1.5 The above commitment would reinforce the fact that the project is avoiding impacts to the ancient woodland by reducing the activities that can take place within 15m of the ancient woodland boundary. Therefore, there would be no residual significant effects on the woodland during construction.

2.2 Hintlesham Woods SSSI – Hintlesham Little Wood (1117096)

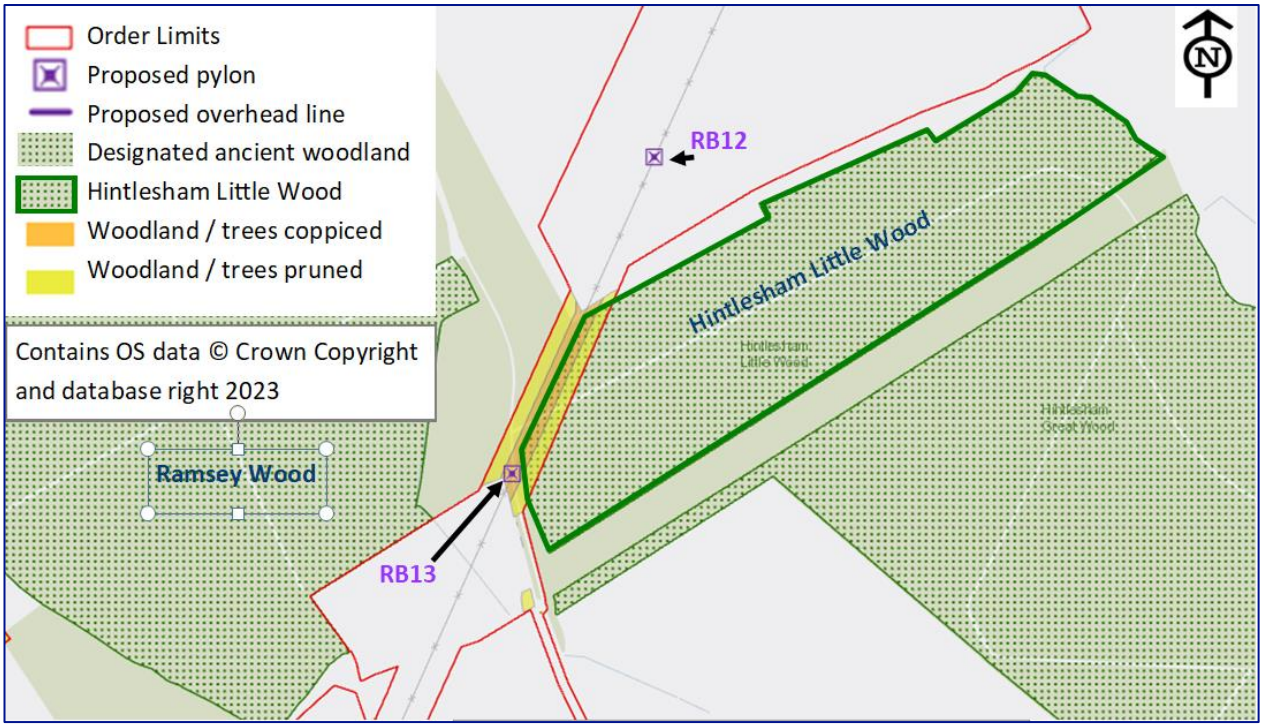
Baseline Environment

2.2.1 Hintlesham Little Wood forms part of Hintlesham Woods SSSI in Section AB: Bramford Substation/Hintlesham. It lies approximately 500m north of Pond Hall Road and within the Order Limits. The SSSI is managed by the Royal Society for the Protection of Birds (RSPB) as one of their reserves.

2.2.2 There is an existing 400kV overhead line located within Hintlesham Woods which is owned and operated by the Applicant. The Applicant operates this line in accordance with all appropriate design safety standards including a suite of National Grid policies and processes. As part of these requirements, vegetation surrounding and beneath the existing 400kV overhead line is managed to maintain operational safety clearances of 5.2m plus three-years' growth between the conductors and the vegetation (two years, plus one years' worth of growth) for the predominant species, to avoid branches interfering with the conductors.

2.2.3 The existing overhead line is subject to regular inspections from the ground (using a small van) or from the air by helicopter or drone to check for visible faults or signs of wear. The inspections confirm whether unplanned refurbishment is required and indicate if vegetation growth were at risk of affecting safety clearances of the overhead line. Refurbishment/uprating of this 400kV overhead line took place in 2012.

Figure 2.2 - Hintlesham Little Wood



Proposed Works

2.2.4 Details of the construction works and timings within Hintlesham Woods are provided in Section 3.4 of ES Appendix 7.1 Annex B: Hintlesham Woods SSSI Assessment [**APP-111**]. In summary:

- The enabling works would include coppicing of trees within Hintlesham Woods along the existing operational maintained swathe beneath the existing 400kV overhead line, which would have a 20m swathe coppiced to ground level (no removal of roots). The trees would be managed at graduated heights for an additional 12.5m on either side of the 20m swathe to accommodate installing the conductors onto the arms of the pylons.
- The proposed overhead line would reuse the pylons at Hintlesham Woods. This would avoid impacts on new areas of woodland within the SSSI by limiting works to within the existing operational maintained swathe.
- Once the proposed overhead line is in place, the coppiced vegetation would be managed to maintain the required safety clearances (as per the existing line). Vegetation along the swathe would need to be maintained to achieve the required safety clearances, as per the current maintenance regime undertaken for the existing overhead line.

Commitments and Residual Effects

2.2.5 The Order Limits have been limited to a 45m width through Hintlesham Woods SSSI, as shown on the Works Plans [**APP-010**]. The works beneath the existing 400kV overhead line at Hintlesham Wood SSSI would involve coppicing and not vegetation removal, as confirmed by embedded measure EM-AB12 below. The following commitments as described in Table 3.1 of ES Appendix 7.1 Annex B: Hintlesham Woods SSSI Assessment [**APP-111**] and secured in the REAC (**document 7.5.2 (B)**) have been made with regards to works within Hintlesham Woods SSSI:

- EM-AB02: *'The new 400kV overhead line will reuse the existing pylons (RB12 and RB13) at Hintlesham Woods SSSI. This avoids impacts on Hintlesham Woods SSSI by reducing the works that take place in and around the SSSI'*;
- EM-AB12: *'Vegetation management for works to the existing overhead line within Hintlesham Woods SSSI would comprise coppicing to ground level for a width of 20m along the existing operational maintenance swathe. In addition, the trees would be managed at graduated heights for up to an additional 12.5m on either side of the 20m swathe for construction activities and to allow the conductors to be installed onto the arms of the existing pylons. Vegetation would be permanently managed to achieve operational safety clearances during operation as is currently undertaken with the existing overhead line. No heavy good vehicle access would be undertaken within the woods. This would avoid additional vegetation management within the SSSI as a result of the works'*; and
- EM-AB13: *'The temporary access route through Hintlesham Woods SSSI will use protective matting (such as trackway) to facilitate works to the existing overhead line and will be microsited using data gathered during the arboricultural and habitat surveys within the 20m coppiced area. This would avoid the more sensitive areas of woodland being impacted by the temporary works'*.

2.2.6 While there would be coppicing to ground level within the existing operational maintained swathe resulting in a short-term modification of habitat, this area would re-establish post construction such that in the long term there would be no additional impact via habitat loss, degradation or modification from the project, when compared to the existing maintenance regime.

2.2.7 As described in Section 7.6 of ES Chapter 7: Biodiversity [**APP-075**] during construction there would be a short-term small impact upon the ancient woodland interest feature of Hintlesham Woods SSSI due to the vegetation being coppiced to ground level for a width of 20m and then cut to a graduated height for an additional 12.5m on either side, resulting in a minor adverse effect reducing to a neutral effect once the coppiced vegetation has re-established subject to the required safety clearances (as per the existing line), which would be not significant.

2.2.8 During operation, ongoing woodland management within the existing operational maintained swathe to maintain the safety distance between the overhead line and the woodland would be required. This would be undertaken annually to maintain the operational safety clearances between the vegetation and overhead line. This is the same as is what is currently undertaken to maintain the existing overhead line operational safety distance. As such, there is expected to be no change in the level of impact upon the habitats of Hintlesham Woods SSSI during operation of the project, resulting in a neutral effect which would be not significant.

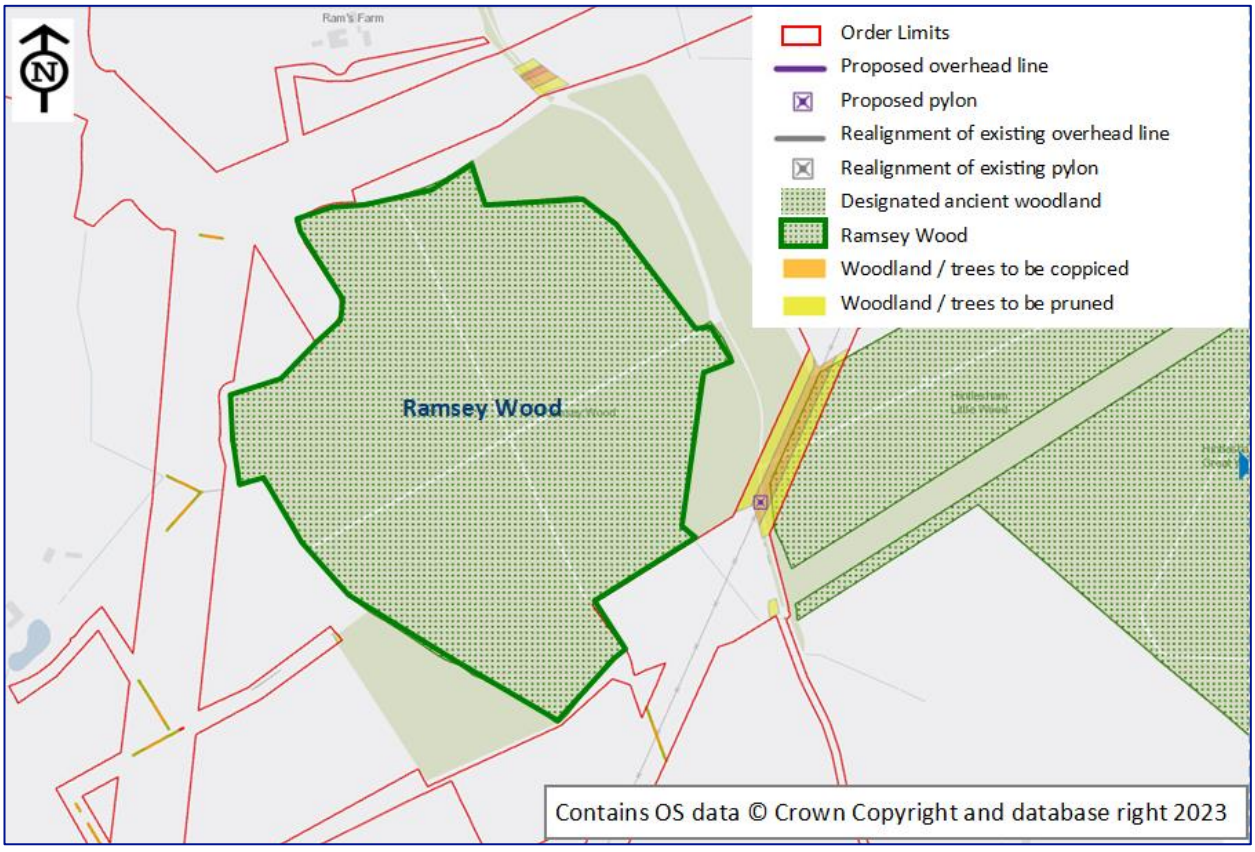
2.2.9 As set out in the Applicant's Comments on Relevant Representations [**REP1-025**], no excavation works are proposed within 15m of Hintlesham Little Wood. The proposed works at this location consist of a temporary access route which is currently located in the arable field to the west of the woodland. The measure was included in Table 6.2 of the LEMP (**document 7.8 (B)**) as the Order Limits lie within 15m and therefore if any temporary works were required, then these would be constrained by the commitment to hand dig. This was a precautionary measure, given that the Order Limits lie within 15m of the woodland. The commitment proposed in paragraph 2.1.4 makes clear the Applicant's intention with regards to the Order Limits at this location and would also further protect Hintlesham Little Wood.

2.3 Hintlesham Woods SSSI – Ramsey Wood (1411366)

Baseline Environment

2.3.1 Ramsey Wood forms part of Hintlesham Woods SSSI in Section AB: Bramford Substation/Hintlesham. It lies adjacent to the Order Limits on the north-western side, opposite to Hintlesham Great Wood and Hintlesham Little Wood.

Figure 2.3 - Hintlesham Woods SSSI - Ramsey Wood



Proposed Works

2.3.2 The existing 400kV overhead line would be routed on new pylons along the north and western boundary of Hintlesham Woods SSSI (Ramsey Wood) for a distance of approximately 1km. This is assumed to comprise three new pylons located adjacent to (but greater than 15m away) the woods.

2.3.3 Within the Order Limits at the south-eastern corner of Ramsey Wood, proposed mitigation areas for woodland planting have been identified around Hintlesham Woods (see ES Figure 16.1: Embedded Measures and Mitigation Proposals [**APP-155**]). Mitigation area MM10 would provide an enhanced habitat connection between the southern aspects of Ramsey Wood and Hintlesham Little Wood. MM09 is a larger habitat mosaic that aims to create habitat connectivity between Ramsey Wood and other component parts of the Hintlesham Woods SSSI; Wolves Wood and Keeble's Grove to the north-west. To implement this habitat and connect to the existing woodland, the Order Limits need to lie adjacent to the woodland.

Commitments and Residual Effects

2.3.4 The following commitments have been made with regards to works adjacent to Ramsey Wood:

- EM-AB10: '*No intrusive construction activities will take place within 15m of the north and western edge of Hintlesham Woods SSSI (excluding planting proposals and works to the existing 400kV overhead line). This includes tracking of heavy vehicles or material storage and soil excavation. Demarcation fencing will be used to identify the exclusion zone. This would avoid impacts on the root protection area (RPA) of trees along the edge of the SSSI*'.
- EM-AB11: '*The temporary access routes used to move between pylons to the north and west of Hintlesham Woods SSSI will be located to the north and west of the proposed overhead line. This mean that vehicle movements would be further from the edge of the SSSI reducing disturbance further'*.

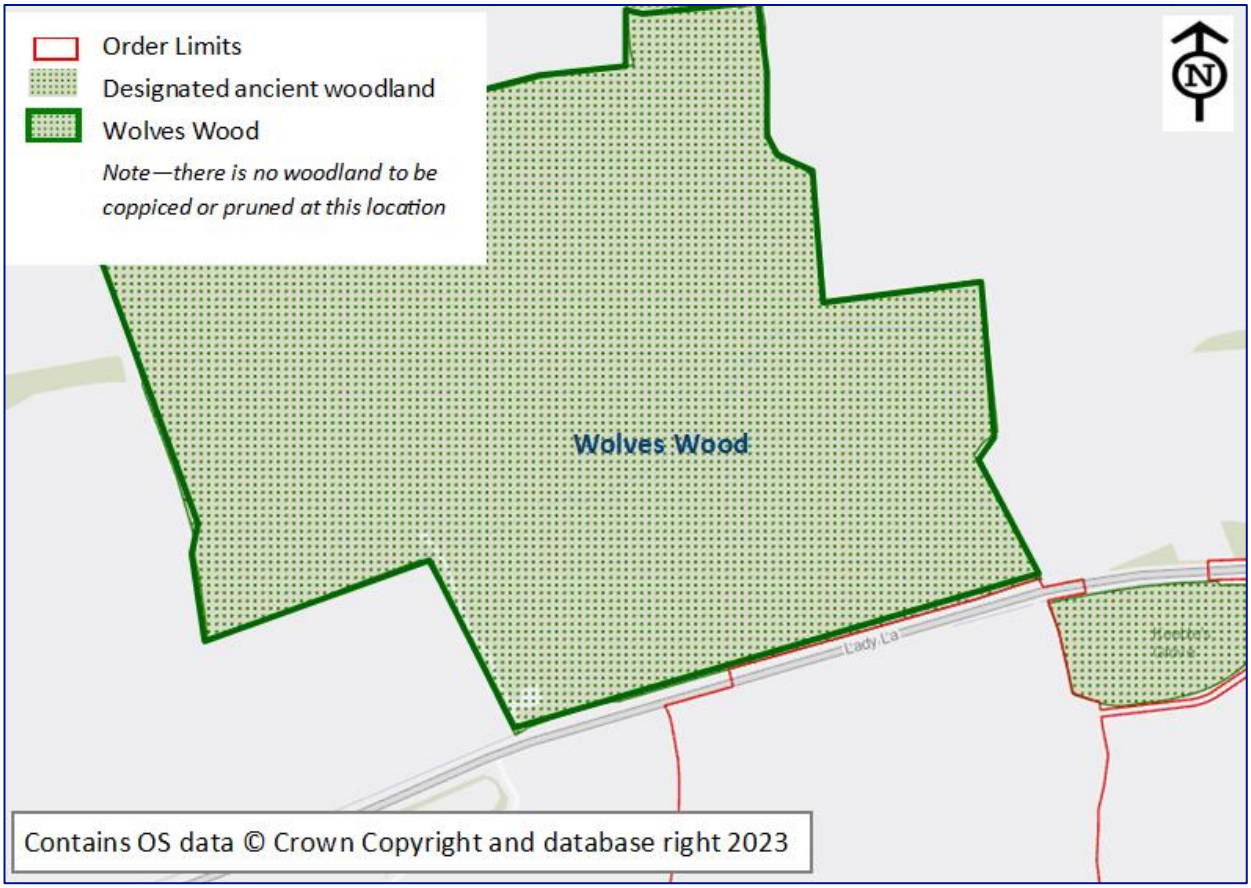
2.3.5 As stated in ES Chapter 7: Biodiversity [**APP-075**], there would be no likely significant effects on the woodland due to these activities or change to the SSSI and ancient woodland habitat in this area. As no intrusive construction activities would take place within 15m of Ramsey Wood excluding planting proposals. Therefore, there would be no disturbance to the root zone of the ancient woodland and no further commitments are proposed at this location. Planting would be designed to take into account the position of the trees.

2.4 Hintlesham Woods SSSI – Wolves Wood (1117088)

Baseline Environment

2.4.1 Wolves Wood forms part of Hintlesham Woods SSSI in Section AB: Bramford Substation/Hintlesham. Comprising an area of approximately 38ha, it lies on the opposite side of the A1071 road to the project.

Figure 2.4 - Hintlesham Woods SSSI - Wolves Wood



Proposed Works

2.4.2 Although the Order Limits lie within 15m of the wood, the only works associated with the project are the construction of a bellmouth to access the field to the south of the A1071. The bellmouth lies to the south of the road, the road would therefore provide a buffer between the proposed works at the bellmouth and Wolves Wood.

Commitments and Residual Effects

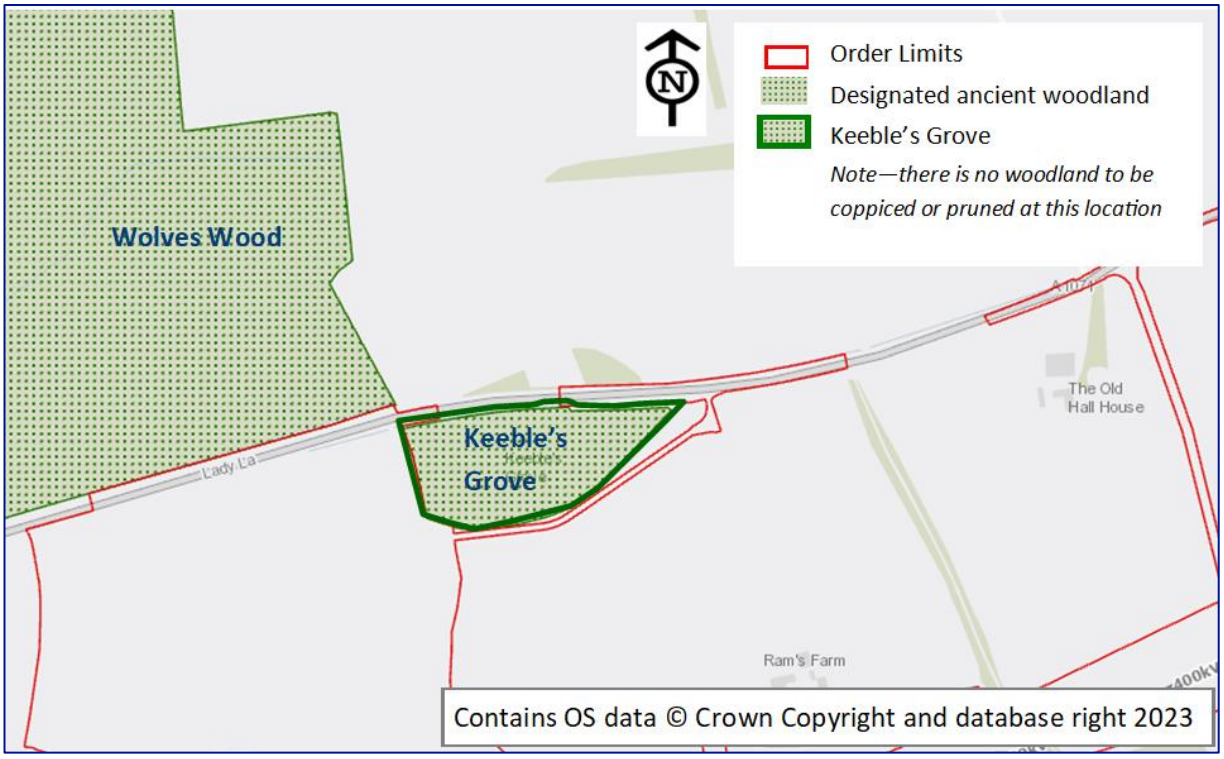
2.4.3 Embedded measure EM-AB06 states that the works adjacent to Keeble's Grove and Wolves Wood are for planting and the temporary access track is for this purpose. The work within these areas would be in accordance with the Vegetation Reinstatement Plan in Appendix B of the LEMP (**document 7.8.2 (B)**). There would be no adverse effect as stated in ES Chapter 7: Biodiversity [**APP-075**]. No further commitments are proposed at this location.

2.5 Hintlesham Woods SSSI – Keeble's Grove (1117090)

Baseline Environment

2.5.1 Keeble's Grove forms part of Hintlesham Woods SSSI in Section AB: Bramford Substation/Hintlesham. Comprising an area of approximately 2ha, it lies adjacent to the Order Limits on the south side of the A1071 road.

Figure 2.5 - Hintelsham Woods SSSI - Keeble's Grove



Proposed Works

2.5.2 The works adjacent to Keeble's Grove are for planting and a temporary access route to provide access for planting only.

Commitments and Residual Effects

2.5.3 Embedded measure EM-AB06 states that the works adjacent to Keeble's Grove and Wolves Wood are for planting and the temporary access track for this purpose. The work within these areas would be in accordance with the Vegetation Reinstatement Plan in Appendix B of the LEMP (**document 7.8.2 (B)**).

2.5.4 The types of vehicles requiring access along the temporary access route would be lights good vehicles. No stone road is required to accommodate larger vehicles.

2.5.5 In response feedback received in the Natural England Relevant Representation [**RR-042**], the Applicant has proposed a further commitment to make clear its intention with regards to the Order Limits at this location:

- EM-AB16: *'The temporary access route adjacent to Keeble's Grove will not be topsoil stripped in order to avoid impacts to the root protection area of this woodland'*.

2.5.6 The above commitment would reinforce the fact that the project is avoiding impacts to the ancient woodland by reducing the activities that can take place within 15m of the ancient woodland boundary.

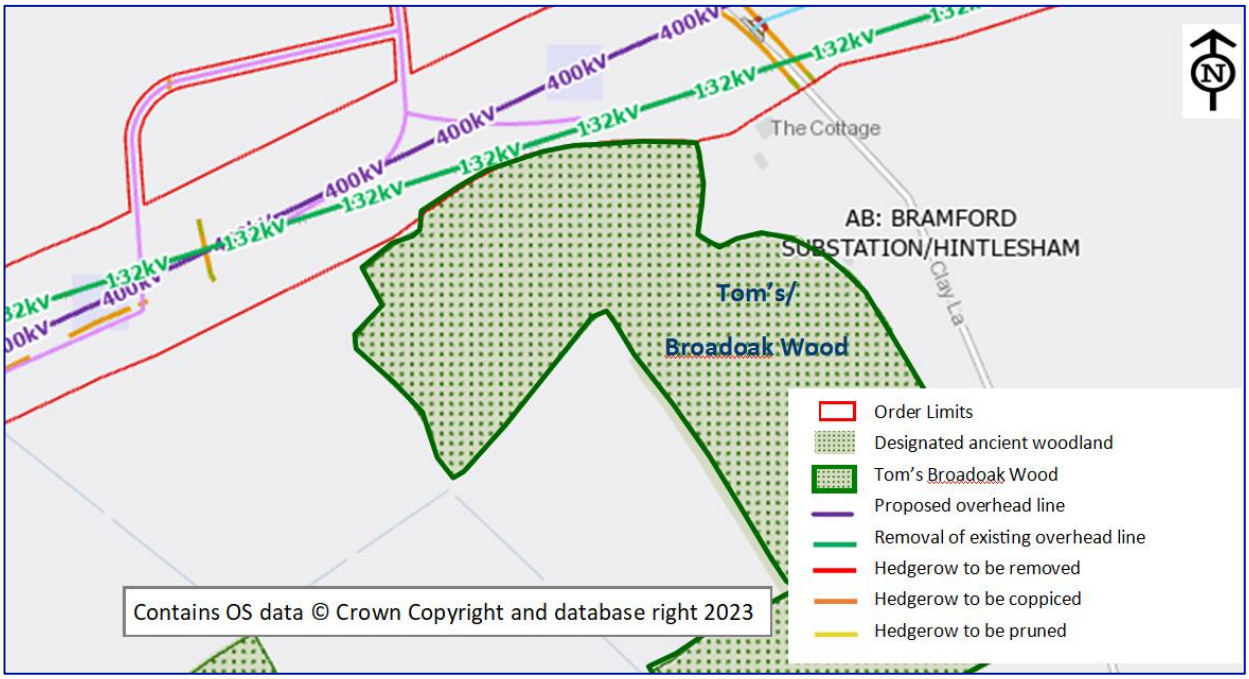
2.5.7 There would therefore be no adverse effect on the ancient woodland, as stated in ES Chapter 7: Biodiversity [**APP-075**]. However, the above commitment would provide further reassurance of the activities that could take place within 15m of the ancient woodland boundary.

2.6 Tom's / Broadoak Wood (1117090)

Baseline Environment

2.6.1 Tom's / Broadoak Wood lies to the west of Clay Lane, immediately south of the Order Limits in Section AB: Bramford Substation/Hintlesham.

Figure 2.6 - Tom's/Broadoak Wood



Proposed Works

2.6.2 The Order Limits run along the northern boundary of the ancient woodland for a distance of approximately 275m. The 132kV overhead line would be removed and the new 400kV overhead transmission line would be installed to the north of the woodland. Groundworks within 15m of ancient woodland could cause tree root damage however the only groundworks within 15m of Toms Wood are associated with the removal of the 132kV overhead line. As described in paragraph 4.5.7 of ES Chapter 4: Project Description [**APP-072**], generally, foundations would be removed to approximately 1.5m below ground level, and subsoil and topsoil reinstated.

Commitments and Residual Effects

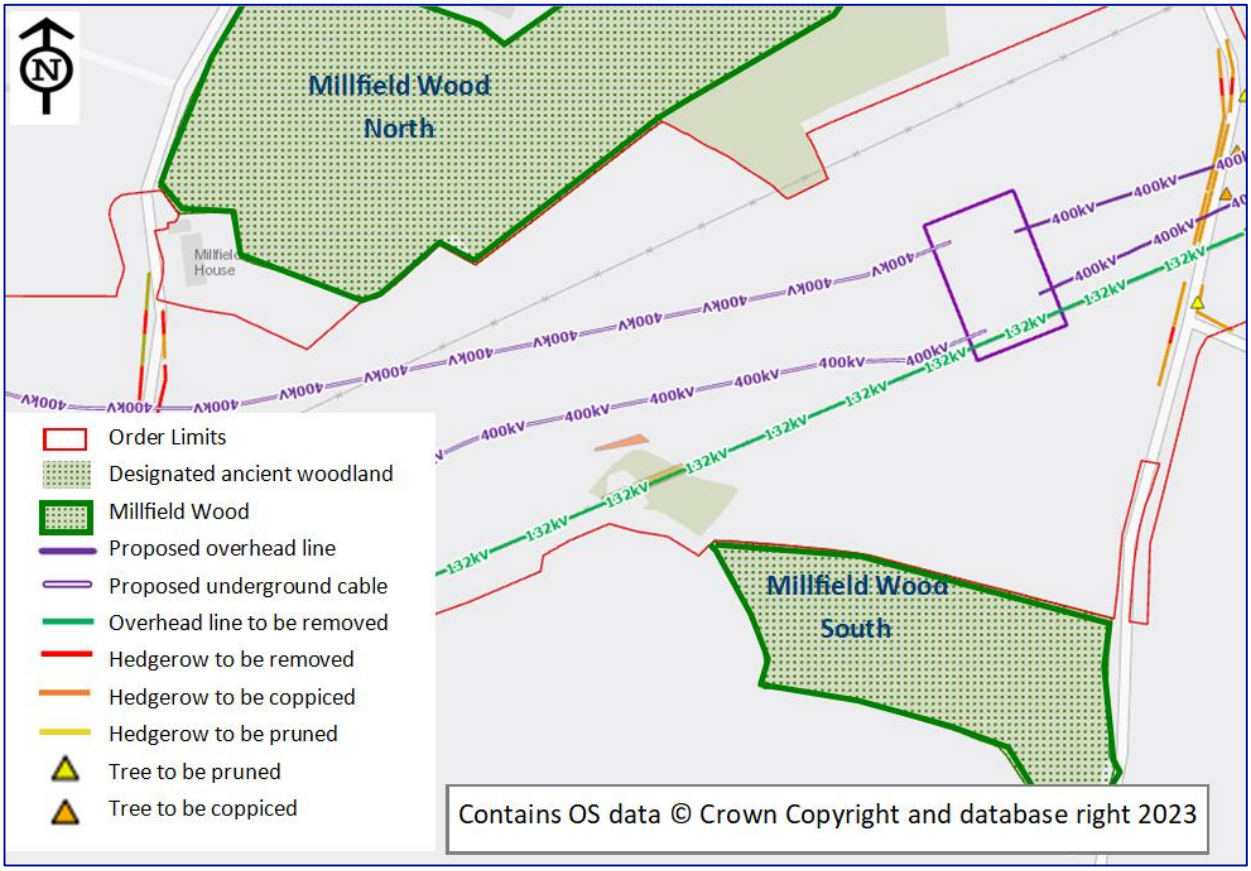
2.6.3 Embedded measure EM-AB07 states that construction of the new 400kV overhead line (including pylon foundations) and any ground excavation work (excluding removal of the existing 132kV pylons) would lie a minimum of 15m away from the designated ancient woodland (Toms Wood) boundary. Embedded measure EM-AB07 excludes removal of the existing 132kV pylons as these pylons are already in their locations and works are required to remove the pylons and associated overhead lines as described in ES Chapter 4: Project Description [**APP-072**]. As stated in ES Chapter 7: Biodiversity [**APP-075**] there would be no adverse effects, therefore no further commitments are proposed at this location.

2.7 Millfield Wood (Millfield Wood North: 1116957, Millfield Wood South: 1411358)

Baseline Environment

2.7.1 Millfield Wood consists of north and south components and is located south of Polstead Heath in Section D: Polstead. The Order Limits lie immediately adjacent to this designated site which comprises two areas of ancient woodland.

Figure 2.7 - Millfield Wood



Proposed Works

2.7.2 The northern Order Limits run adjacent approximately 225m of the northern area of woodland, while the southern Order Limits are immediately adjacent to the boundary of the southern woodland for approximately 200m. Dedham Vale East cable sealing end (CSE) compound would lie between the woodland. The CSE compound would be within a fenced compound, and contain electrical equipment, support structures, control building and a permanent access track.

2.7.3 The design includes embedded planting around the CSE compound, which will be maintained for the life of the CSE compound (EM-D01). This will filter and soften views of the electrical infrastructure and reduce the effects on views and on the setting of Dedham Vale Area of Outstanding Natural Beauty (AONB). Details of the construction methodology for the underground cables are provided in ES Chapter 4: Project Description [**APP-072**].

Commitments and Residual Effects

2.7.4 The following commitments have been made with regards to works adjacent to Millfield Wood north and south:

- EM-D02: *'Construction of the new 400kV underground cables and any ground excavation work (e.g. associated with the temporary access route or new service connection pursuant to the DCO) will lie a minimum of 15m away from the designated ancient woodland (Millfield Wood north) boundary'*; and
- EM-D03: *'The works adjacent to Millfield Wood South are for landscape planting only. The work within this area will be undertaken in accordance with the Vegetation Reinstatement Plan in Appendix B of the LEMP (**document 7.8.2 (B)**)'*.

2.7.5 There would therefore be no adverse effect on the ancient woodland, as stated in ES Chapter 7: Biodiversity [**APP-075**]. No further commitments are proposed at this location.

2.8 Broom Hill Wood (1116953)

Baseline Environment

2.8.1 Broom Hill Wood lies to the north of the Order Limits, approximately 115m south of the A1071 in Section E: Dedham Vale AONB. The woodland sits immediately adjacent to the Order Limits for approximately 425m.

Figure 2.8 - Broom Hill Wood

Proposed Works

2.8.2 A temporary access track is proposed within the Order Limits adjacent to Broom Hill Wood.

Commitments and Residual Effects

2.8.3 EM-E06 states that construction of the new 400kV underground cables and any ground excavation work (e.g. associated with the underground cable temporary access route) will lie a minimum of 15m away from the designated ancient woodland (Broom Hill) boundary. Construction access for the existing 132kV overhead line will use an existing track. To prevent ground works and compaction, temporary matting/trackway will be used where the temporary access route is located within 15m of the ancient woodland unless advised otherwise by an arboriculturalist.

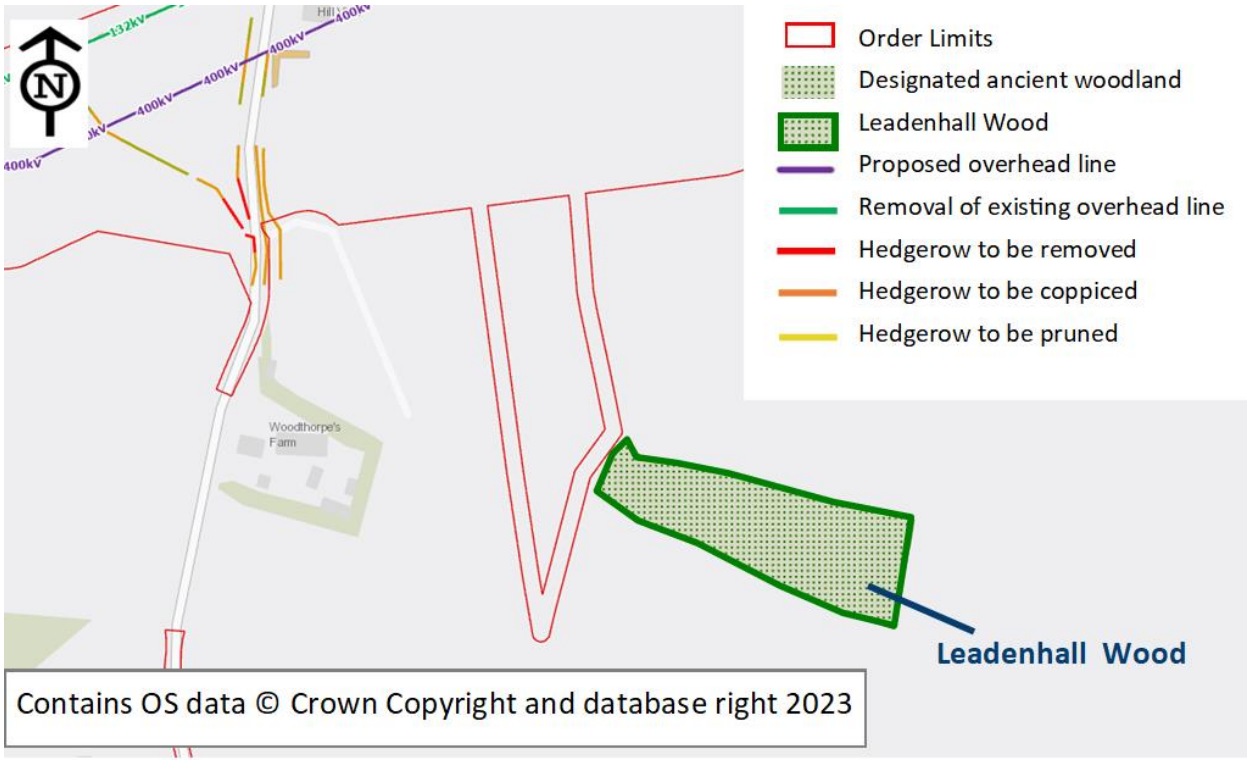
2.8.4 There would therefore be no adverse effect on the ancient woodland, as stated in ES Chapter 7: Biodiversity [**APP-075**]. No further commitments are proposed at this location.

2.9 Leadenhall Wood (1411352)

Baseline Environment

2.9.1 Leadenhall Wood, an ancient woodland consisting of mainly ash and lime coppice, is located west of the A134 in Section F: Leavenheath/Assington. The ancient woodland is in two sections, of which the westerly most part is adjacent to the Order Limits.

Figure 2.9 – Leadenhall Wood



Proposed Works

2.9.2 Leadenhall Wood is approximately 3m east of the Order Limits for approximately 30m where a services connection cable is proposed. The services connection cable is anticipated to run beneath an existing private track that runs around the perimeter of the field to the west of Leadenhall Wood. Three 200mm cable ducts are anticipated to be laid at a depth of between 600mm and 1100mm.

Commitments and Residual Effects

2.9.3 EM-F02 states that site specific measures will be employed for the excavation of the trench for the service connection where they are delivered pursuant to the DCO to reduce the effects on the RPA of the Leadenhall ancient woodland. A method statement will be prepared with input from an arboriculturalist. Measures may include but not be limited to hand digging and vacuum excavation under arboricultural supervision.

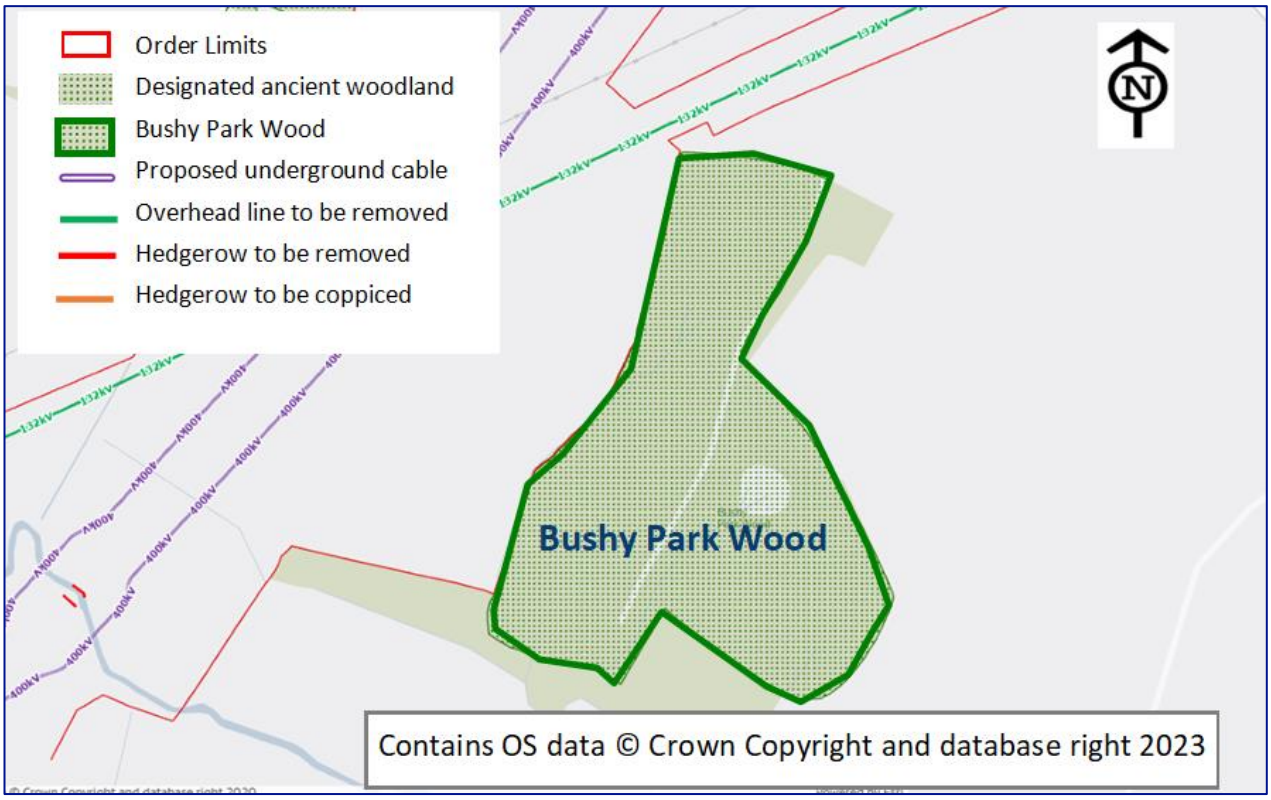
2.9.4 There would therefore be no adverse effect on the ancient woodland, as stated in ES Chapter 7: Biodiversity [**APP-075**]. No further commitments are proposed at this location.

2.10 Bushy Park Wood (1411357)

Baseline Environment

2.10.1 Bushy Park Wood lies to the south-east of Broom Hill Wood and sits adjacent to the Order Limits on the southern side.

Figure 2.10 - Bushy Park Wood



Proposed Works

2.10.2 No works are proposed within 15m of Bushy Park Wood.

Commitments and Residual Effects

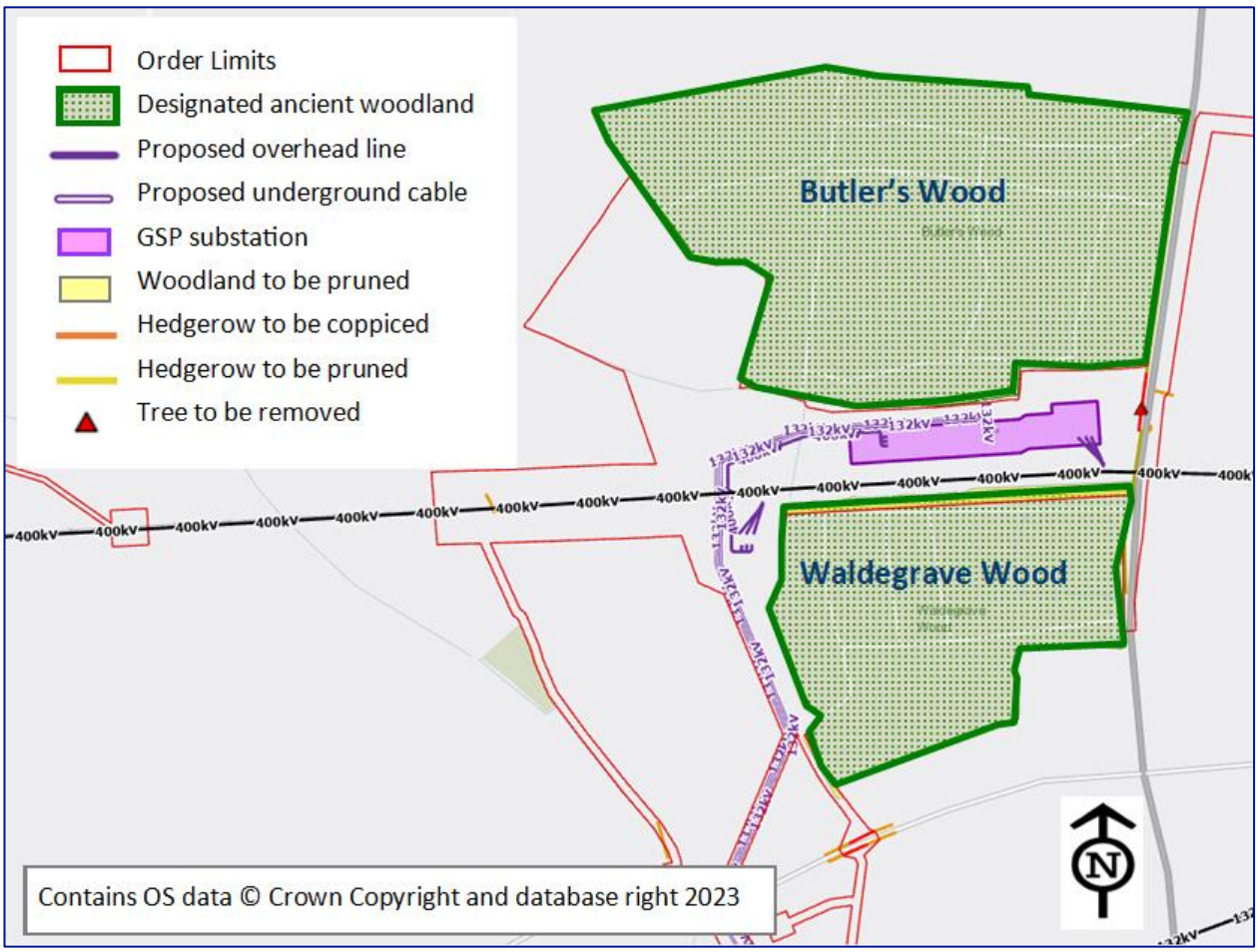
2.10.3 There would therefore be no adverse effect on the ancient woodland, as stated in ES Chapter 7: Biodiversity [**APP-075**]. No further commitments are proposed at this location.

2.11 Butler's Wood (1116843) and Waldegrave Wood (1420162)

Baseline Environment

2.11.1 Butler's Wood and Waldegrave Wood lie directly west of the A131. The woodlands sit adjacent to the Order Limits on the northern and southern side respectively, in Section H: GSP Substation.

Figure 2.11 - Butler's Wood and Waldegrave Wood



Proposed Works

2.11.2 The Applicant is proposing to remove the existing 132kV overhead line between Burstall Bridge and Twinstead Tee, a distance of approximately 25km. This requires alternative arrangements to be put in place to secure the supply of the local electricity distribution network. This would be achieved by establishing a new GSP substation, between Butler's Wood and Waldegrave Wood, to the east of Wickham St Paul.

2.11.3 A 400kV single circuit sealing end compound to the west of Waldegrave Wood would be separately fenced outside of the proposed GSP substation to the south of the existing overhead line. This would connect the southern circuit of the existing 400kV overhead line back into the proposed GSP substation via a new 400kV underground cable. Works would be required to the existing 400kV overhead line, including the removal and replacement of a pylon.

2.11.4 The proposed GSP substation would also be connected to the existing 132kV overhead line to the south via a new underground cable to the west of Waldegrave Wood. An existing pylon on the 132kV overhead line would be replaced with a new CSE platform pylon to enable this. The construction would be facilitated by temporary overhead line diversions on both the existing 400kV and the existing 132kV overhead lines.

2.11.5 The proposed GSP substation would include a fenced compound located between Butler's Wood and Waldegrave Wood. The proposed GSP substation would include two super grid transformers with noise enclosures, to convert the voltage from 400kV to 132kV, as well as other switchgear, modular buildings and equipment.

2.11.6 As a result of operational safety clearances, there may need to be pruning of individual trees on the boundary of Waldegrave Wood to maintain the operational safety clearance associated with the existing 400kV overhead line.

Commitments and Residual Effects

2.11.7 No tree felling is required within Butler's Wood or Waldegrave Wood for the proposed GSP substation and associated works., Both woodlands are bordered by a ditch in excess of 1m depth therefore groundworks within 15m of ancient woodland will not cause tree root damage. The arboricultural survey has concluded that the ditches create hydrological separation and enforce habitat separation between the woodlands and the adjacent arable land where the GSP substation is proposed. Together, these provide evidence that the tree roots would be confined to the woodland areas outside of the working areas.

2.11.8 EM-H03 states that *'The proposed GSP substation has been located away from the southern edge of Butler's Wood. Construction works will not encroach into or beyond the ditch that runs east west along the northern and southern edges of the GSP substation'.* Some pruning of trees may be required along the eastern edge of Butler's Wood as shown on LEMP Appendix A: Vegetation Removal and Reinstatement Plan [**APP-183**] to provide an appropriate visibility splay for the access.

2.11.9 Whilst there may need to be pruning of individual trees on the boundary of Waldegrave Wood to maintain the operational safety clearance associated with the existing 400kV overhead line, as stated in ES Chapter 7: Biodiversity [**APP-075**] the impact would be of negligible magnitude on high value receptors, resulting in a neutral effect, which would not be significant. There would therefore be no adverse effect on the ancient woodland, as stated in ES Chapter 7: Biodiversity [**APP-075**]. No further commitments are proposed at this location.

3. Potential Ancient Woodland

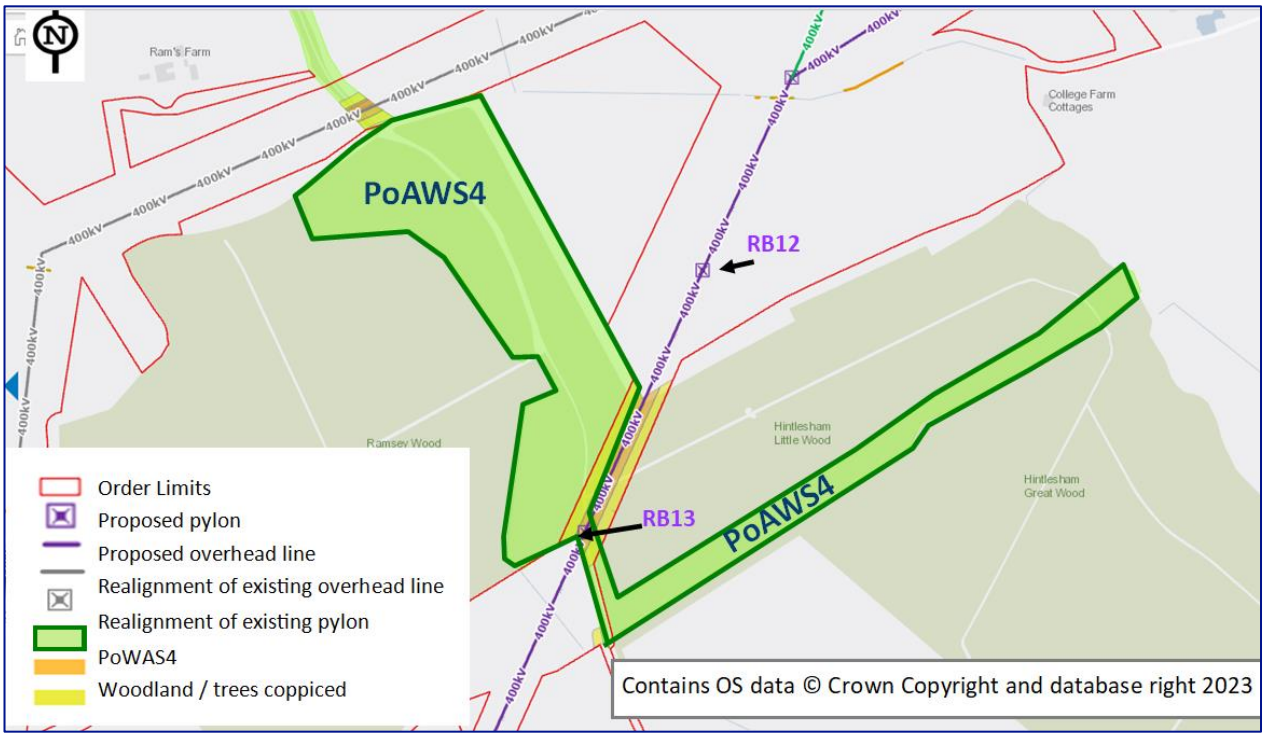
3.1 Hintlesham Woods (PoAWS4)

Baseline Environment

3.1.1 PoAWS4 comprises two large linear areas; one within Ramsey Wood and one separating Hintlesham Little Wood and Hintlesham Great Wood in Section AB: Bramford Substation/Hintlesham. The historic mapping (Suffolk Historic Environment Record) strongly suggests that the PoAWS4 has ancient woodland origin with the habitat recorded on site exemplifying an area of pre 19th century vegetation clearance but while the mature trees of that time have gone, the ground flora diversity has remained. In terms of potential ancient woodland identified by the project, PoAWS4 has been assessed as part of the Hintlesham Woods SSSI.

3.1.2 The existing baseline at PoAWS4 is further described under Hintlesham Little Wood (Section 2.2).

Figure 3.1 - PoAWS4



Proposed Works

3.1.3 Proposed works at PoAWS4 are as described under Hintlesham Little Wood (Section 2.2).

Commitments and Residual Effects

3.1.4 Current commitments and residual effects for PoAWS4 are as described for Hintlesham Little Wood (Section 2.2).

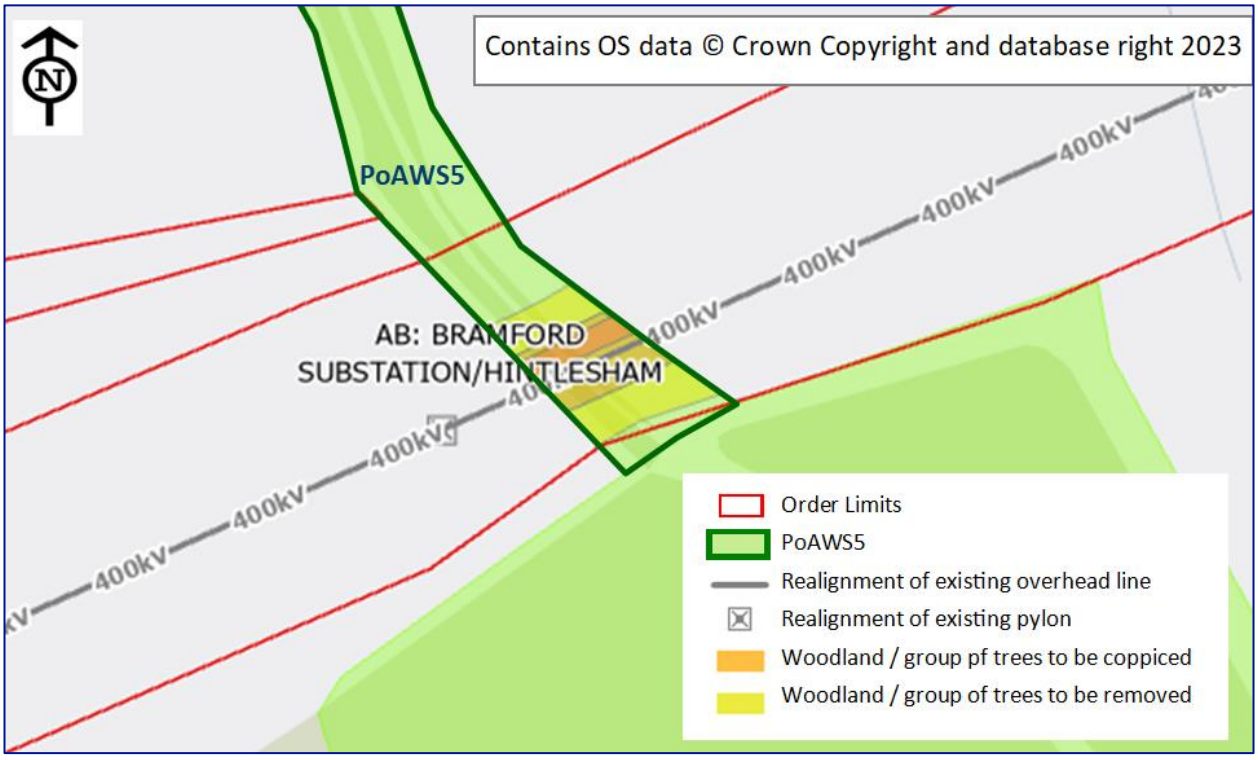
3.1.5 Whilst no vegetation removal is anticipated for Hintlesham Little Wood as a result of the temporary access route adjacent to PoAWS4, the commitment proposed in paragraph 2.1.4 would also further protect Hintlesham Little Wood.

3.2 Hintlesham Woods (PoAWS05)

Baseline Environment

3.2.1 PoAWS5 was formed of a belt of trees following a footpath/track to Hintlesham Woods. PoAWS5 lies to the north of Hintlesham Woods in Section AB: Bramford Substation/Hintlesham. As the habitat was wider than 5m and would not be able to be returned to a stockproof barrier it is more consistent with woodland than hedgerow although this may have been its origin. A double line of trees planted on both sides of the path is likely to have formed the original access route through to the woodland, linking with areas of settlements and the wider arable landscape.

Figure 3.2 - PoAWS5



Proposed Works

3.2.2 The tree belt to the north of Hintlesham Woods (PoAWS5) would require a temporary access route through it for construction of the overhead line around the north and west of Hintlesham Woods. A 5m gap, including removal of roots, is proposed where the temporary access route would cross the tree belt.

3.2.3 During operation, regular pruning of PoAWS5 would be required for approximately 25m to maintain the operational safety clearance between the overhead line and the vegetation below.

Commitments and Residual Effects

3.2.4 EM-AB05 states that '*The tree belt to the north of Hintlesham Woods (PoAWS5) will be retained other than at a 5m gap where the proposed temporary access route will cross the tree belt. Soil from the PoAWS5 will be stored separate to general soil storage so that it can be replaced at PoAWS5, where soil is suitable for reuse (for example, not contaminated).'* This would reduce the need for clearance through the habitat to the north of the woodland would maintain an important habitat connection and corridor for protected species. Soil storage and reinstatement would aid re-establishment of existing ground flora.

3.2.5 On completion of construction activities, replacement woodland planting would be provided to supplement the reinstated original soils. The resulting change in PoAWS5 habitat is likely to result in a short-term small magnitude on a high value receptor, resulting in a minor adverse effect, reducing to a neutral in the long term once the vegetation re-establishes. This would be not significant.

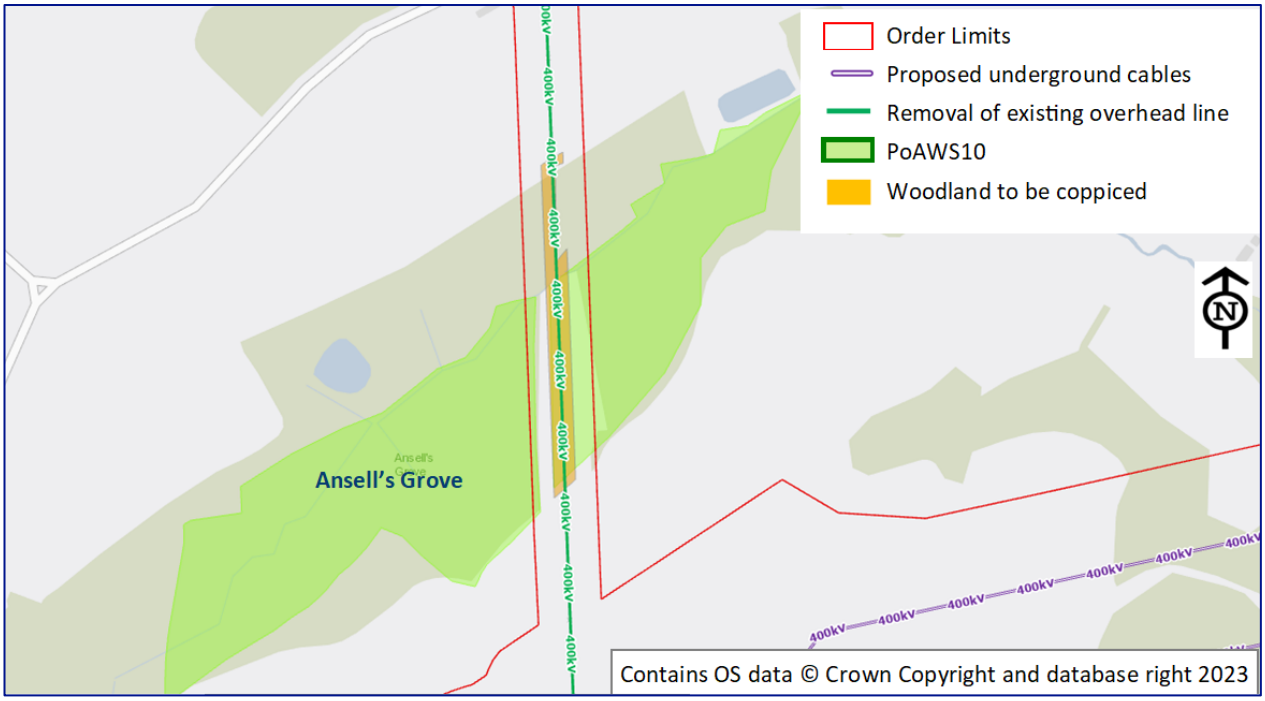
3.2.6 During operation, while the structure of the habitat could be lowered in height within the operational safety clearances, the function and integrity of the habitat would continue. As a repeated activity there is unlikely to be any pathway to effect, particularly over such a relatively short distance. The resulting long-term change in PoAWS5 is assessed to be not significant.

3.3 Ansell's Grove (PoAWS10)

Baseline Environment

3.3.1 Ansell's Grove (PoAWS10) lies approximately 150m east of Lorkin's Lane in Section G: Stour Valley. Features of Ansell's Grove include woodland within a valley varying in structure from the damp valley centre to the dryer slopes. Wet woodland indicator species are present as well as ancient woodland indicative species.

Figure 3.3 - Ansell's Grove



Proposed Works

3.3.2 Removal of the existing 400kV overhead line and pylons is proposed at this location. A temporary access route is required through the existing operational maintained swathe to remove the existing overhead line. An existing track would be used but some coppicing may be required (roots retained). The entire operational maintained swathe would be left to recolonise naturally once the overhead line has been removed and no further management would be necessary which has previously taken place to maintain operational safety clearances.

Commitments and Residual Effects

3.3.3 The following commitments have been made with regards Ansell's Grove:

- EM-G07: *'The 400kV overhead line will be removed at Ansell's Grove/Ash Ground LWS (from approximately X,Y: 587022.00, 236075.00 and 587016.00, 236202.00) located in Section G: Stour Valley. At this location, construction activities will be confined to the existing operational maintenance swathe. The conductors will be lowered down and pulled out. Light vehicles will use existing tracks within the woodland'*; and
- EM-G11: *'The temporary construction works to remove the existing 400kV overhead line at Ansell's Grove (PoAWS10) will be limited to the existing operational maintained swathe within the woodland. There will be no temporary access route installed within the woodland. Light vehicles will use existing tracks within the woodland'*.

3.3.4 As stated in ES Chapter 7: Biodiversity [**APP-075**], impacts on Ansell's Grove are assessed to be minor beneficial in the long term, which is not significant. Therefore, no further commitments are proposed at this location.

4. Conclusion

4.1 Summary of Technical Note Findings

4.1.1 There are 12 areas of designated ancient woodland within or immediately adjacent to the Order Limits. Hintlesham Little Wood is the only one located within the Order Limits. All of the areas of designated ancient woodland have an additional nature conservation designation.

4.1.2 The site surveys identified three additional sites to contain indicator species and other features representative of ancient woodland origin and therefore are likely to be ancient woodland and are treated as such within the assessment. These are: PoAWS4 – Hintlesham Woods; PoAWS5 – a linear feature to the north of Hintlesham Woods; and PoAWS10 – Ansell's Grove.

4.1.3 Bearing in mind the embedded measures secured within the REAC, the assessment presented in ES Chapter 7: Biodiversity [**APP-075**] has concluded that there are no likely significant residual effects in relation to designated ancient woodland or PoAWS during construction or operation. In addition, whilst the flexibility within the LoD may result in differences in the magnitude of impact, the sensitivity testing presented in Section 7.11 of ES Chapter 7: Biodiversity [**APP-075**] has shown that no new or different likely significant effects to those identified in the baseline scenario assessed in Sections 7.6 to 7.10.

4.1.4 Two additional commitments have been identified to provide further reassurance to consultees regarding the conclusions of impacts on designated ancient woodland and PoAWS. Table 4.1 provides a summary of the recommendations for ancient and PoAWS within 15m of the Order Limits.

Table 4.1 – Summary of Recommendations

Site	Further Recommendations or Commitments Required?
Hintlesham Woods SSSI - Hintlesham Great Wood (1117096)	A commitment such that there would be no soil excavation within 15m of Hintlesham Great Wood, Hintlesham Little Wood and PoAWS4: • EM-AB15: No topsoil stripping is to be undertaken within 15m of the ancient woodland boundary at Hintlesham Little Wood and Hintlesham Great Wood. Temporary matting/trackway will be used where the temporary access route is located within 15m of PoAWS4, Hintlesham Great Wood and Hintlesham Little Wood to avoid compaction of the root protection area.
Hintlesham Woods SSSI - Hintlesham Little Wood (1117096)	As for Hintlesham Woods SSSI – Hintlesham Great Wood
Hintlesham Woods SSSI – Ramsey Wood (1411366)	No further commitments or recommendations suggested.
Hintlesham Woods SSSI - Wolves Wood (1117088)	No further commitments or recommendations suggested.
Hintlesham Woods SSSI – Keeble's Grove (1117090)	A commitment such that the temporary access track will not be topsoil stripped: • EM-AB16: The temporary access route adjacent to Keeble's Grove will not be topsoil stripped in order to avoid impacts to the root protection area of this woodland.

Site	Further Recommendations or Commitments Required?
Tom's / Broadoak Wood (1117090)	No further commitments or recommendations suggested.
Millfield Wood (Millfield Wood North: 1116957, Millfield Wood South: 1411358)	No further commitments or recommendations suggested.
Broom Hill Wood (1116953)	No further commitments or recommendations suggested.
Leadenhall Wood (1411352)	No further commitments or recommendations suggested.
Bushy Park Wood (1411357)	No further commitments or recommendations suggested.
Butler's Wood (1116843)	No further commitments or recommendations suggested.
Waldegrave Wood (1420162)	No further commitments or recommendations suggested.
Hintlesham Woods (PoAWS4)	As for Hintlesham Woods SSSI – Hintlesham Great Wood
Hintlesham Woods (PoAWS05)	No further commitments or recommendations suggested.
Ansell's Grove (PoAWS10)	No further commitments or recommendations suggested.

References

Department of Energy and Climate Change (2011) Overarching National Policy Statement for Energy (EN-1). London: Stationery Office.

Forestry Commission and Natural England (2018) Ancient Woodland, Ancient Trees and Veteran Trees: Protecting them from development.

Forestry Commission and Natural England (2022) Ancient Woodland, Ancient Trees and Veteran Trees: Advice for making planning decisions.

Page intentionally blank

National Grid plc
National Grid House,
Warwick Technology Park,
Gallows Hill, Warwick.
CV34 6DA United Kingdom

Registered in England and Wales
No. 4031152
nationalgrid.com