

# Norfolk Boreas Offshore Wind Farm Position Statement Church Road, Colby

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*Photo: Ormonde Offshore Wind Farm*

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## 1 Introduction

1. This position statement sets out the Applicant's final position on Church Road, Colby, including consideration of the proposed alternative by North Norfolk District Council (NNDC) and the development of site-specific mitigation.
2. The Environmental Statement Chapter 29 LVIA [APP-242] identifies that at Church Road, Colby, a small number of trees are susceptible to a localised significant effect. At this location open-cut trenching would be carefully sited so as to minimise the number of trees to be removed by using existing gaps in the tree line and where removal is necessary, targeting smaller specimens. However, restrictions applied to planting over cable easements prevents trees from being replanted over the 13m easement and immediately either side of the easement. Therefore, a localised significant effect could occur in relation to the physical effect on the trees and direct replacement planting would not be possible.
3. NNDC identified in their Local Impact Report [REP2-087] that they believe that at this location the duct should be installed via a trenchless crossing technique so as to avoid the loss of trees. In the Clarification Note Trenchless Crossing B1149 and Church Road Colby [REP4-017] the Applicant set out the reasons for and against a trenchless crossing at this location. The note highlighted that at this location an access is required across Church Road in order to access land directly to the east for the trenchless crossing of King's Beck (TCL11) (which is a sensitive watercourse, see ES Figure 5.4 Map 3 [APP-268]). This is because TC11 is committed as a 'stop end' to mitigate direct impacts to King's Beck. As such, trenchless crossing at this location would not remove the necessity to open a notable gap in the hedgerow and removal of any associated trees, as removal would be required for access.

## 2 Proposed Alternative by North Norfolk District Council

4. During a call between the Applicant and NNDC on 21<sup>st</sup> February 2020, the Council acknowledged that some tree losses are unavoidable in order to access the land between Church Road and King's Beck and suggested that a preferred approach would be to divert the construction accesses in proximity to the existing Banningham Hall Farm access (approximately 200m north of the currently proposed crossing of Colby Road). Whilst NNDC acknowledge that this will still result in some tree losses on the eastern side of Church Road, NNDC considered this may be preferable as there are already trees missing from the western side of Church Road in this location (due to the presence of Banningham Hall Farm access). NNDC introduced this alternative in their submission at Deadline 5 [REP5-067].
5. The current approach for open cut trench crossing at Church Road includes the following elements (see Figure 1):

- Introduction of temporary junctions either side of Church Road at the location the cable route currently crosses Church Road - to maintain access across the running track east and west of Church Road;
- Duct installation beneath Church Road undertaken by open cut trench;
- Temporary 20 to 25m gap in hedgerows either side of Church Road to make space for the temporary junction accesses;
- Reinstatement of hedgerows following construction works;
- Removal of three immature trees and one semi-mature tree adjacent to the road to make space for the temporary junction; (micrositing will seek to further reduce this);
- Replacement of trees following construction works. This cannot be directly above the 13m permanent easement (i.e. above the installed cables) but will be as close to the location they were removed as possible (subject to landowner agreement outside the Order limits);
- Construction time for open cut trench crossing 1 to 2 weeks; and
- Total time running track required to access works east of Church Road – 10 to 12 weeks.

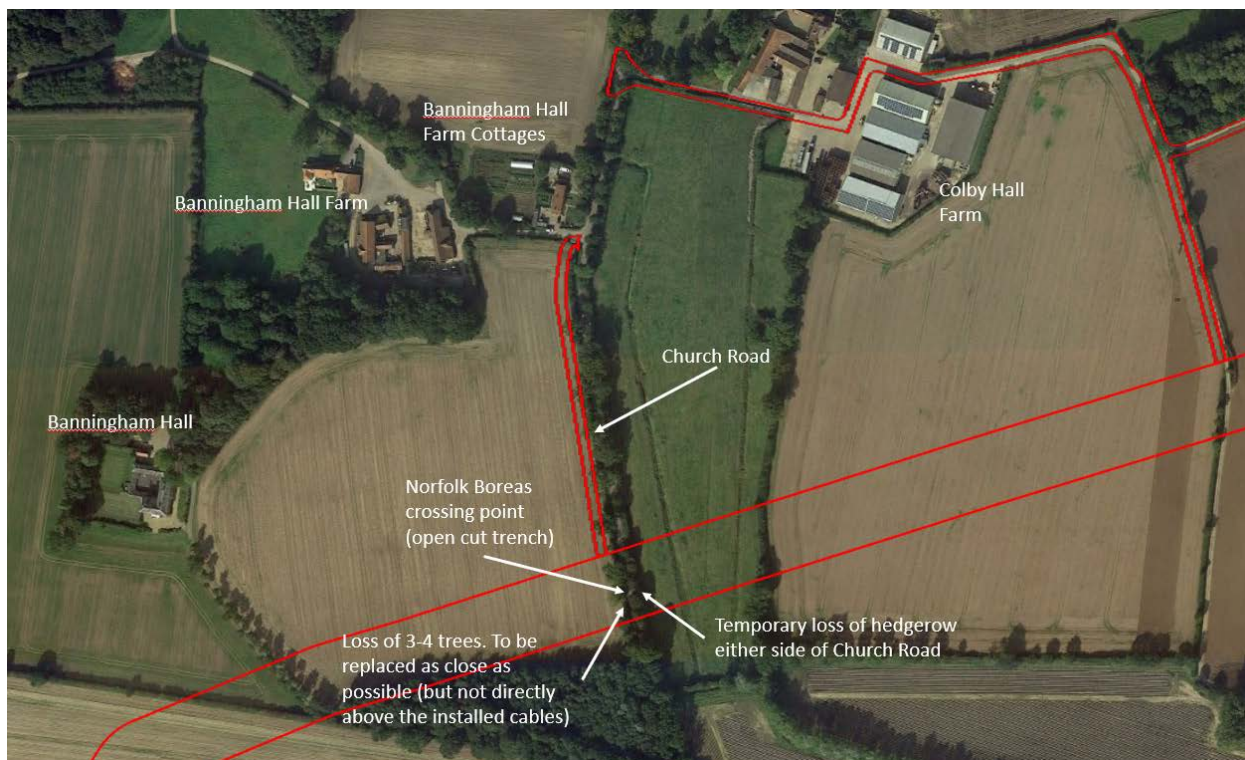


Figure 1 Baseline proposal for crossing Church Road

6. The alternative approach for crossing Church Road by a trenchless crossing technique, as proposed by North Norfolk District Council, includes the following elements (see also Figure 2):

- Introduction of an alternative 250m of running track west of Church Road and outside of the existing Order limits to connect to the existing Banningham Hall Farm and Cottages private access (compared to a 100m section proposed within the Order limits);
- Introduction of a temporary junction on the east side of Church Road opposite the existing Banningham Hall Farm and Cottage access - to maintain access across the running track east and west of Church Road;
- Introduction of an alternative 250m of running track east of Church Road and outside of the existing Order limits (compared to a 150m section proposed within the Order limits);
- Total additional length of running track proposed of 250m outside of the existing Order limits;
- Introduction of a trenchless crossing compound either side of Church Road to facilitate a trenchless crossing (150m x 50m – launch side and 100m x 50m exit side, which would also be outside of the existing Order limits);
- Duct installation beneath Church Road undertaken by trenchless crossing techniques;
- Total additional temporary land take required (trenchless crossing compounds and additional running track length) of 1.4ha outside of the existing Order limits;
- Temporary 20 to 25m gap in hedgerow on the east side of Church Road to make space for the temporary junction access;
- Reinstatement of hedgerow following construction works;
- Removal of 3 to 4 mature trees where present within the 20-25m gap described above (micrositing would seek to further reduce this);
- Replacement of trees following construction works in the location they were removed;
- Construction time for trenchless crossing 6 to 7 weeks; and
- Total time running track required to access works east of Church Road – 10 to 12 weeks.

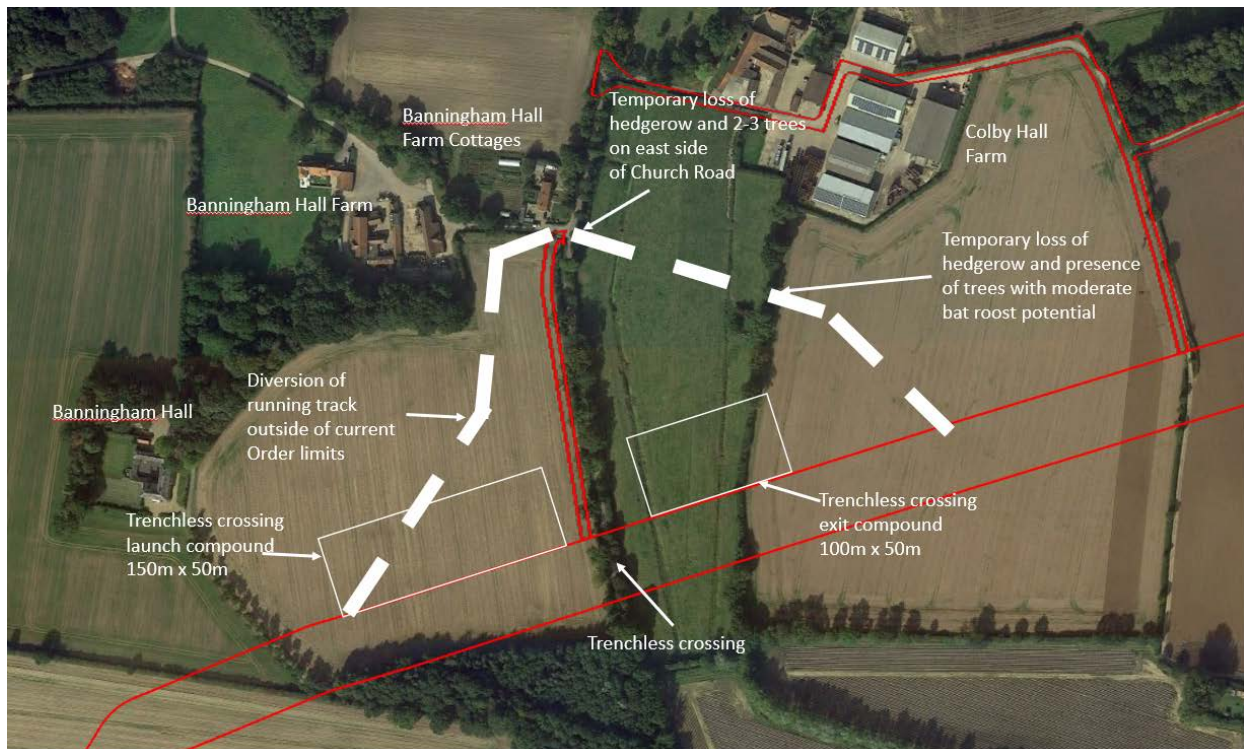


Figure 2 North Norfolk District Council proposal for crossing Church Road

7. During discussions with NNDC the Applicant raised concerns over potential noise effects from diverting the access road closer to residential properties and the introduction of a new junction opposite the existing access. However, the Applicant agreed to undertake an environmental review of NNDC's proposed alternative.

## 2.1 Environmental Review of Proposed Alternative

8. The Applicant has undertaken a review of the potential environmental constraints and opportunities of the alternative proposed by NNDC of a trenchless duct installation and access diversion, which seeks to avoid / reduce impacts associated with trees losses along Church Road.
9. Full details of the environmental review are presented in Annex 1 which sets out the following:
  - Details of the potential constraints or opportunities associated with the alternative proposed by NNDC for the following environmental receptors;
    - Ground conditions and contamination, water resources and flood risk, land use and agriculture, ecology/ornithology, traffic and transport, noise and vibration, air quality, archaeology and cultural heritage; landscape and visual impact, and tourism and recreation
  - A table summarising the constraints and opportunities.
  - A summary of how the impacts assessed within the Norfolk Boreas ES would change if NNDC's proposed alternative was taken forward.

10. In summary, the review identified as follows:
- The proposed realignment to the running track would introduce potentially significant safety risks to road users along Church Road without further detailed assessment and the identification of additional mitigation;
  - Potential for significant construction noise impacts at Banningham Hall Farm Cottages for up to 19 weeks, given the proximity of this noise sensitive receptor to both the works areas and the two proposed new road junctions (15m).
  - Whilst trees could be replaced in the location from which they were would be removed as part of the proposed alternative, there is the potential for significant landscape and visual impacts to be experienced by residents of Banningham Hall Cottages (significant for 5-10 years) due to trees being removed directly opposite this property until replacement trees become established. In addition, Banningham Hall will have direct views of the trenchless crossing compound (for the duration of the trenchless crossing works – approximately 10-12 weeks) compared to the more contained activities of open cut trenching for a shorter period of time.
11. Therefore, the proposed alternative does not avoid tree losses on Church Road and could introduce road safety risks, significant construction noise impacts and significant landscape and visual impacts as a result of the loss of trees themselves. Furthermore, the alternative cannot be accommodated within the existing Order limits.

## 2.2 Applicant's Position on Proposed Alternative

12. The Applicant's position is that the proposed alternative is not proportionate or appropriate. The alternative requires land which is outside the Order limits and brings the construction activities closer to residential receptors which could introduce significant noise and landscape and visual impacts. Furthermore, it could introduce significant safety risks to road users along Church Road as a result of introducing two temporary junctions on a bend. The proposed open cut trench crossing of Church Road is considered appropriate given that access through the hedgerows lining Church Road will always be necessary. Micro-siting will seek to minimise tree losses, with any trees removed being replaced as close as practicable to the location where they were removed, and all hedgerows will be fully reinstated.

## 3 Landscape and Visual Impact at Church Road

13. The section of Church Road, to the east of Banningham Hall, comprises road-side planting with a mix of tree species, ages and condition set along both sides and



backed by hedgerow. Whilst the spacing of the trees is fairly regular in parts, and the hedgerows relatively complete, there are also substantial gaps which extend to approximately 10m to 18m between some trees. This irregularity in the spacing, size and condition prevents these road-side trees from presenting the key characteristics of a formal avenue.

14. In ES Chapter 29 LVIA [APP-242], the loss of these trees was assessed as a localised significant effect. This was in respect of the physical effect on the trees as landscape elements and did not relate to the perceived effect on landscape character, which would be very limited owing to the very small number of trees being removed, especially in proportion to the much wider abundance of tree cover in this area, but moreover, reflecting the limited change to the baseline character in which gaps in the tree cover already exist.
15. The current location of the open cut trench has been intentionally located in a section of Church Road where the trees occur intermittently on both sides of the road, so that any necessary removals could be accommodated without a notable change in the landscape character. With a width of 20 to 25m required in this location, it is predicted that four of the existing trees would need to be removed. The removals would comprise two immature trees on the eastern side of the road and one immature and one slightly more mature tree on the western side. These trees are roadside trees that are small to medium in size and lack the size and form of the more mature species that occur along other parts of the road-side (see Plate 1).
16. The change brought about by the loss of these four trees would be relatively easily accommodated in this rural landscape, which is broadly modified by commercial farming. While the removals will add a new gap on either side of the road, the presence of other notable gaps to the north will ensure that these gaps will not notably alter the baseline character. Replacement planting of hedgerows would ensure the sense of enclosure on Church Road could be restored once the hedgerows matured. It is the intention that with careful micro-siting of the trenching that sufficient space would be available to enable some replacement tree planting within, albeit on the edges, of the Order limits.
17. The only visual receptors directly affected by the tree removals would be road-users, although they would be travelling at speed such that their views would be short term and transitory and the gaps would appear as a minor change in this local landscape.



**Plate 1 - View looking north along Church Road.**

18. Plate 1 shows the location of the 45m wide onshore cable route crossing Church Road, with the extent of the Order limits indicated by the red lines. The location of a 20 to 25m wide access through the hedgerow on either side would be micro-sited within this 45m onshore cable route to minimise tree losses.

#### **4 Site-Specific Survey and Mitigation**

19. It has been established and acknowledged by NNDC that some tree losses are unavoidable on Church Road. The Applicant acknowledges the concerns raised by NNDC over replacement of these tree losses. However the Applicant considers that with replacement planting of the hedgerows and the careful micro-siting of the trenching, that sufficient space would be available to enable some replacement tree planting within, albeit on the edges, of the Order limits.
20. The full details of the micro-siting will be undertaken at the detailed design stage when a full arboricultural survey has been undertaken and further details on cable routing are known. However, a study has been undertaken to help inform the proposals for the onshore cable trench crossing at Church Road at this stage. A high-level survey has been carried out to establish, in approximate terms, which trees would be likely to be removed to accommodate the trench crossing and to illustrate the potential for some replacement trees to be included, along with the replacement of the hedgerows, as part of the mitigation planting. To facilitate this a site visit was undertaken on 16<sup>th</sup> March 2020 by the Applicant's Landscape Consultant.

21. The illustrative plan and photographs highlight the four trees which are likely to be removed to accommodate the trench crossing. In the absence of a detailed survey, the plans are based on paced out measurements on site and verified against the photos to give an approximate plan of the relative dimensions between trees.



**Photo 1 View north up Church Road**

22. Photo 1 shows the view of the cable route crossing looking north up Church Road. On the western side (left of the photo) the tree closest to the left edge is to be retained (T4W) while the next two trees (T3W and T2W) are to be removed. On the eastern side (right of the photo) the small trees closest (T3E and T2E) are to be removed, while the larger tree with the missing limbs (T1E) is to be retained.
23. The plan shown in Plate 2 is indicative with approximate measurements to illustrate the spacing between the trees in the section of Church Road where the onshore cable trench crossing will occur. The four trees likely to be removed are shaded grey. The tree numbers are referenced in the following photographs. The viewpoint locations for the photos numbered 1 to 8 are shown along with the direction of the view.

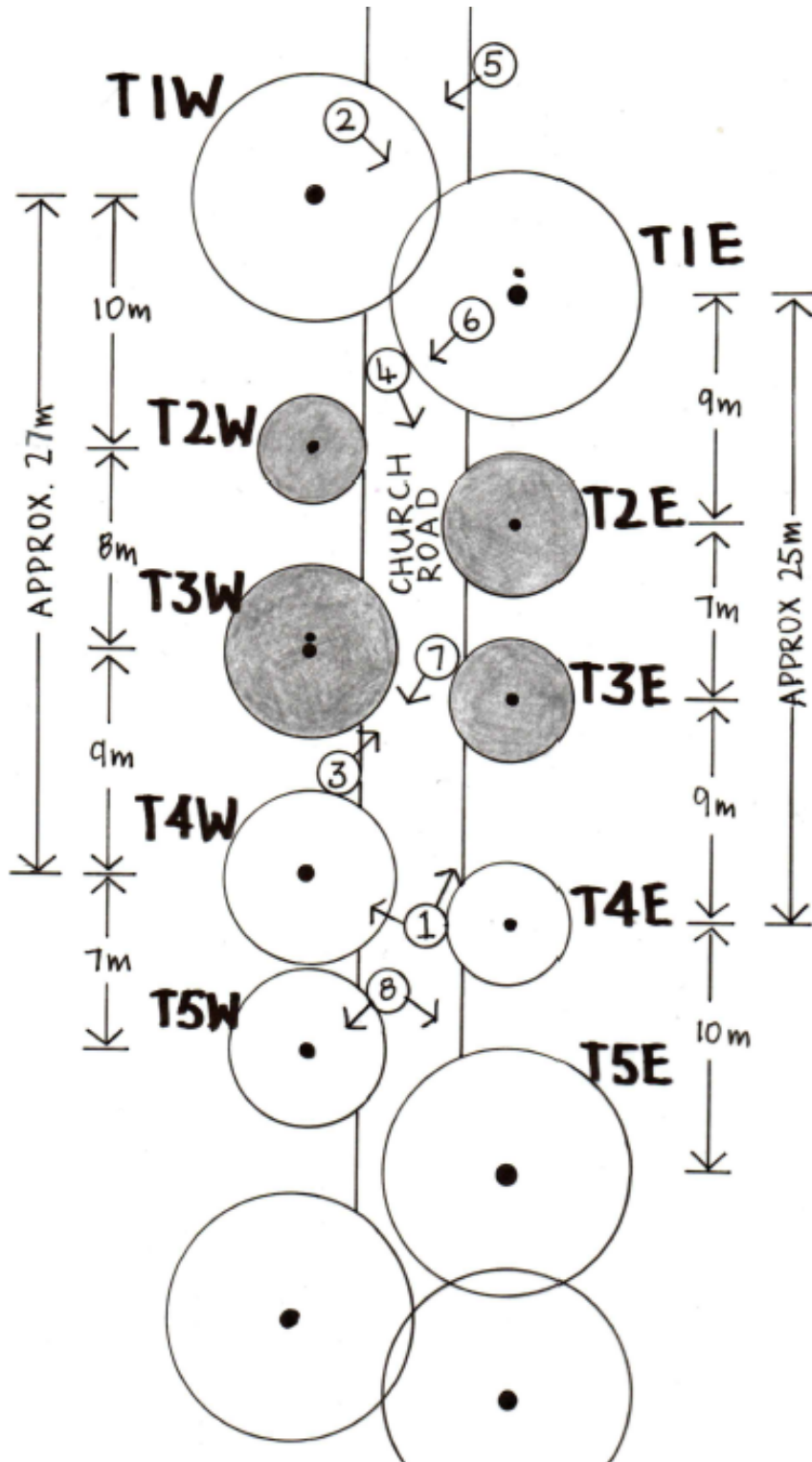


Plate 2 - Plan of Church Road – Trees to be removed and viewpoint locations for photos 1 to 8



**Photo 2 T1E**

This mature tree is not to be removed and marks the northern extent of the eastern section in which trees will be removed. This tree is missing a major limb which compromises its condition and form.



**Photo 3 T2E/T3E**

These two immature trees are to be removed on the eastern side of the road. This will create an approximate 25m gap between the trees to be retained to the north and south.



**Photo 4 T3E /T4E /T5E**

The closest immature tree (T3E) is to be removed while the next immature tree (T4E) and mature tree (T5E) are to be retained and these mark the southern extent of the eastern section in which trees will be removed.



**Photo 5 T1W**

This mature tree is not to be removed and marks the northern extent of the western section in which trees will be removed. The covering ivy is affecting the health of this tree.



**Photo 6 T2W / T3W**

This immature tree (T2W) and semi-mature tree (T3W) are to be removed on the western side of the road. This will create an approximate 27m gap between the trees to be retained to the north and south.



**Photo 7 T4W / T5W**

These semi-mature trees are to be retained and mark the southern extent of the western section in which trees will be removed.



**Photo 8 View south down Church Road**

More mature trees with larger canopies at the southern end of the road will not be affected.

24. The removal of two immature trees on the eastern side of the road (T2E and T3E) and one immature (T2W) and one semi-mature tree (T3W) on the western side will open up an approximate 27m gap on the west and 25m gap on the east - sufficient space to enable the trenching across the road. The high level survey information indicates it is possible to plant at least two replacement trees i.e. one on the west and one on the east within the Order limits, along with the replanting of the hedgerows. However, as part of the detailed design the Applicant will look to accommodate all four replacement trees within the Order limits.
25. If the further two replacement trees cannot be accommodated within the Order limits (subject to detailed design post-consent) then they will be replaced as close as practically possible, ideally further along Church Road to ensure no net loss of trees on Church Road. However, planting outside the Order limits will be subject to landowner consent.



## 5 Applicant's Position

26. The Applicant's position is that owing to the very small number of trees being removed and the presence of existing notable gaps in the tree cover already at this location, the change brought about by the loss of these four trees will not notably alter the baseline landscape character.
27. Replacement planting of hedgerows would ensure the sense of enclosure on Church Road could be restored once the hedgerows matured. The Applicant has committed to replacing all trees within North Norfolk to ensure no net loss. With use of micro-siting the Applicant would plant at least two replacement trees and if possible (subject to detailed design) all four replacement trees within the Order limits. If all four replacements cannot be accommodated in the Order limits then they will be planted as close as possible (subject to landowner consent), ensuring no net loss of trees within North Norfolk.
28. Given there will be no notable change in the landscape character of Church Road and that all tree losses will be replaced, this is considered sufficient to mitigate impacts from tree losses at this location.
29. The Applicant proposes to include the following text to be included in an updated OLEMS to capture the comment for replacement planting:

*“To mitigate potential impacts at Church Road, Colby, micro-siting of the cable will be undertaken to limit tree removal and to target smaller specimens for any tree removal required, as well as to maximise the opportunity for replacement trees to be planted within the Order limits, along with the replanting of the hedgerows.*

*If all replacement tree planting cannot be accommodated within the Order limits (subject to detailed design post-consent) then they will be replaced as close as practically possible, ideally further along Church Road to ensure no net loss of trees on Church Road (subject to landowner consent outside of the Order limits).”*

## Annex 1 Environmental Review of NNDC Proposed Alternative

1. This Annex sets out the following:
  - Details of the potential constraints or opportunities associated with the alternative proposed by NNDC for the following environmental receptors:
    - o Ground conditions and contamination;
    - o Water resources and flood risk;
    - o Land use and agriculture;
    - o Ecology/ornithology;
    - o Traffic and transport;
    - o Noise and vibration;
    - o Air quality;
    - o Archaeology and cultural heritage;
    - o Landscape and visual impact;
    - o Tourism and recreation.
  - A table summarising the constraints and opportunities.
  - A summary of how the impacts assessed within the Norfolk Boreas Environmental Statement (ES) would change if NNDC's proposed alternative was taken forward.

### Ground Conditions and Contamination

2. The proposed realignment of the running track and the change of cable installation method sits within the previously assessed study area, and is situated above the same Neogene to Quaternary rocks (undifferentiated) bedrock, diamicton (till) superficial geology and crosses the same section of secondary aquifer (A). There are no geologically designated sites, source protection zones or mineral safeguarding areas in proximity to this location.
3. The proposed realignment for this section of running track and the change of cable installation method in this location does not increase the significance of any impacts assessed within the ES.

### Water Resources and Flood Risk

4. The proposed realignment of the running track and change of cable installation method sits within the previously assessed study area and does not cross any additional flood zones areas, groundwater bodies, groundwater abstractions or designated sites.
5. The proposed realignment for this section of running track and the change of cable installation method in this location does not increase the significance of any impacts assessed within the ES.

## Land Use and Agriculture

6. The proposed realignment of the running track and change of cable installation method sits within the previously assessed study area and would be located within the same agricultural fields that the original alignment crosses. All these fields are classified as Grade 2 agricultural land (very good quality) and an additional 1.4ha of this land will be temporarily taken out of production, increasing the total area of Grade 2 agricultural land temporarily impacted by the works from 159.2ha to 160.6ha; however, this does not increase the significance of any impacts assessed within the ES and no additional mitigation would be required over and above that identified within the ES.
7. There are two buried utilities that run parallel to Church Road in this location – an Anglian Water asset and a UK Power Networks cable. With the introduction of the diverted running track both of these assets would be crossed twice (once at the trenchless crossing and once for the new running track); however, this does not increase the significance of any impacts assessed within the ES and no additional mitigation would be required over and above that identified within the ES.

## Ecology / Ornithology

8. The proposed realignment of the running track and change of cable installation method sits within the previously assessed study area in this location. The nearest statutory or non-statutory designated sites are in excess of 2km from this location and the proposal would not increase any risk of impacts to those sites. However, the following changes are anticipated:
  - The running track realignment would avoid temporary losses (20-25m gap) to important hedgerow 79;
  - Tree losses where the realigned running track crosses Church Road could be reinstated in the location they were removed (compared to the commitment to replace them as close as possible);
  - The realignment of the running track will require the removal of 3-4 trees on the eastern side of Church Road that were not previously surveyed. These appear to be more mature specimens compared to those on the existing alignment and would require further survey to determine their potential to support roosting bats (the trees lining Church Road within the existing Order limits were surveyed in 2017 and assessed as having low bat roost potential);
  - The diversion of the running track would lead to temporary hedgerows losses at important hedgerows 77 and 78 further north than currently proposed (refer to Figure A1). It should be noted that the important hedgerow plan does not show hedgerows 78 and 79 extending as far north as Banningham Hall Farm Cottages, which is simply a function of the extent of the survey and mapping that was

relevant to the proposed Order limits. Both hedgerows are in fact present along the full length of Church Road other than gaps for field entrances or private accesses, i.e. realigning the running track outside of the area where hedgerows were mapped does not avoid impacts to important hedgerows;

- The realignment of the running track across hedgerow 77 has the potential to lead to further temporary tree losses although with micro-siting these may be avoidable. The trees associated with hedgerow 77, in proximity to the realigned running track, were assessed as having moderate bat roost potential;
- A temporary loss of a further 1.4ha of suitable arable habitat for ground nesting birds; and
- Diversion of the running track brings the project closer to one pond with the potential to support great crested newts (although the species was absent in 2017).

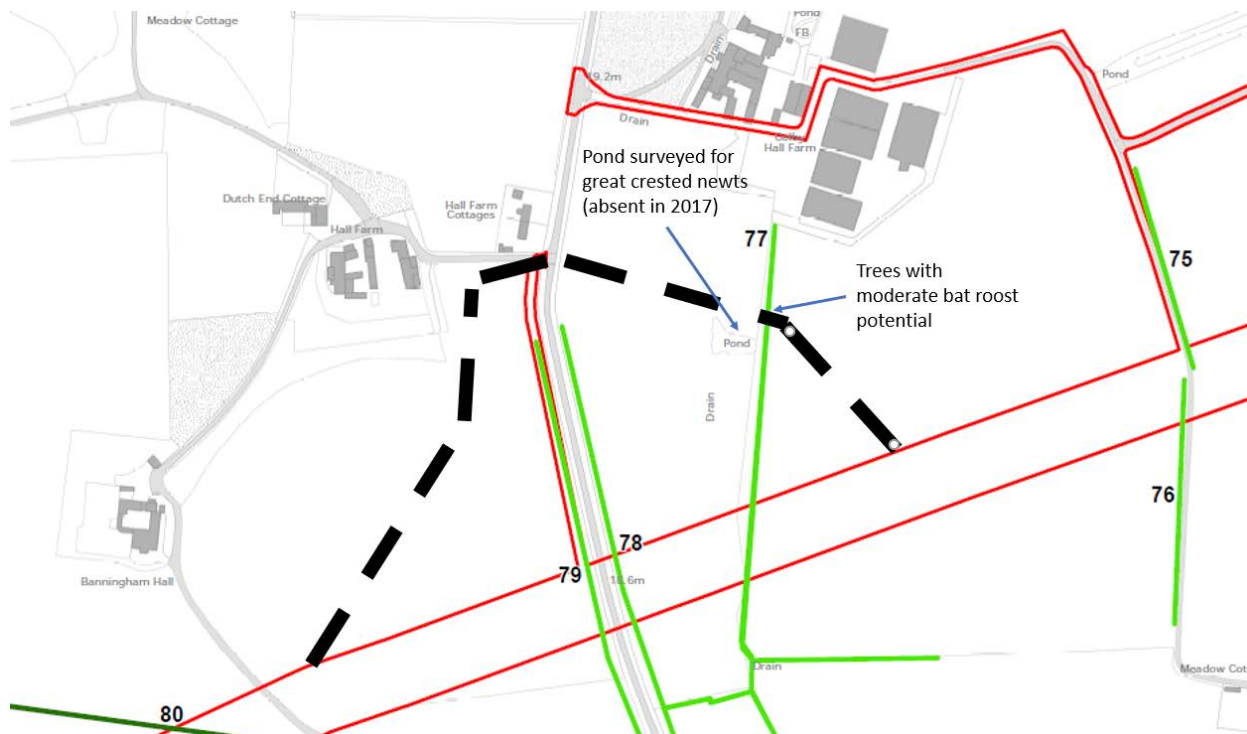


Figure A1- Ecological features (important hedgerows numbered)

### Traffic and Transport

9. Based on the DMRB CD 123 Technical Standards<sup>1</sup>, the required safe level of visibility (up and down the carriageway) at any temporary junctions is 215m (60mph – speed limit of Church Road) and 90m (based on 30mph – a potentially more realistic speed given the narrow nature of Church Road). The current location of the crossing point on Church Road is on relatively straight section of the road. To achieve the 90m of visibility some lopping of branches and reduction in height of the existing hedgerows

<sup>1</sup> Design Manual for Road and Bridges (2020) CD123 Geometric design of at-grade priority and signal-controlled junctions

will be required – refer to Drawing TP-PB5640-DR022 in the Access Layout Drawings section (previously included in Appendix 4 of trenchless crossing clarification note [REP4-017]). The proposed diversion of the running track would introduce two temporary junctions on a bend in Church Road. Construction traffic approaching from the western side of Church Road would only have 17.5m of visibility south towards the bend in the road. To achieve the required 90m of safe visibility a significant section of trees up and down the western side of Church Road would need to be removed – refer to Drawing TP-PB5640-DR044 in the Access Layout Drawings section.

10. To avoid further tree losses an alternative approach would require the introduction of traffic management for the duration of the works (approximately 19 weeks). Given the nature of the road (single lane traffic) it is envisaged that traffic management would need to take the form of traffic lights (specifically for uncontrolled employee construction traffic).
11. Ultimately the proposed realignment to the running track would introduce potentially significant safety risks to road users along Church Road without further detailed assessment and the identification additional mitigation.
12. In addition, the 250m of additional running track and the additional trenchless crossing compounds require an additional 600 HGVs (1,200 HGV movements) for this section of the works. This principally relates to stone deliveries and HGVs to remove the stone following completion of the works. The introduction of this additional construction traffic on the road network would also need to be assessed.

### Noise and Vibration

13. The diversion of the running track will bring construction activities and construction traffic to within 15m of the nearest receptor (Banningham Hall Farm Cottages). This receptor was not originally assessed within the ES due to the distance of separation from the originally proposed alignment of the works (200m). The cable duct installation works east of Church Road require 48 daily HGV movements delivering materials back and forth from the nearest mobilisation area for the duration of those works east of Church Road (10-12 weeks). With the proposed diversion of the running track these 48 daily HGV movements would now be within 15m of Banningham Hall Farm Cottages.
14. Quantification of the noise impact would need to be considered through detailed noise modelling of the construction activities and traffic flows along the running track. However, as a guide the assessment presented within the ES considered another noise sensitive receptor located 15m from the construction works (CRR10) near Aylsham. The assessment of pre-construction noise activities (topsoil strip and introduction of running track) identified that this receptor would experience noise

levels of 76.6dBA at a distance of 15m. On this basis it is reasonable to assume that residents of Banningham Hall Farm Cottages would experience a similar major adverse noise impact, albeit temporary, during the installation of the running track. These works to install the running track and junctions in proximity to Banningham Hall Farm Cottages would be expected to take 1-2 weeks.

15. Banningham Hall Farm Cottages would then experience noise associated with HGVs using the running track in proximity to these properties. This noise would be for the duration of time that the running track is required to access areas east of Church Road (construction time for a trenchless crossing 6-7 weeks; and construction time for trenching works east of Church Road – 10-12 weeks – i.e. up to 19 weeks in total).
16. In addition, the effect of introducing two new junctions in proximity to a noise sensitive receptor will also increase the potential noise contribution related to accelerating and decelerating HGVs as vehicles approach the junctions along the running track. High acceleration can potentially increase noise levels by a further 4.5dB<sup>2</sup> (over and above the noise levels of HGVs driving in proximity to the receptor). Assessment of road traffic noise works on the principle that significant impacts are related to a noise increase of 3dB. On the basis that accelerating HGVs alone can increase noise levels by 4.5dB (before taking into account the noise of HGVs simply driving up and down the running track) it is reasonable to assume that a significant noise impact would be experienced at Banningham Hall Farm Cottages associated with HGVs using the running track for the duration of the works (up to 19 weeks). Again, the exact nature of the effect would need to be considered through detailed noise assessment of these construction traffic activities.
17. For the impacts identified above, it is likely that the pre-construction activities to introduce the running track could be mitigated using the existing measures set out within the ES; but mitigation for the 19 week period that HGVs would be using the running track in proximity to Banningham Hall Farm Cottages cannot be determined without further noise assessment of the impacts of traffic flows.

### Air Quality

18. The diversion of the running track will bring construction activities and construction traffic closer to the nearest receptor (Banningham Hall Farm Cottages).
19. Following the mitigation outlined within the ES to reduce impacts associated with construction dust, there is not anticipated to be any increase in impact significance to sensitive receptors and there is no change to the assessment within the ES.

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<sup>2</sup> UK Noise Association (2009) *Speed and Road Traffic Noise*

## Archaeology and Cultural Heritage

20. The proposed realignment of the running track and change of cable installation method are in proximity to Banningham Hall Farm Cottages (Grade II listed) and Colby Hall Farm House (Grade II listed). In addition, the proposed realignment of the running track east of Church Road would cross an area identified within the Historic Environment Record as post-medieval earthworks (assessed as low-medium heritage significance).
21. The realignment of the running track west of Church Road would bring the works to within 15m of Banningham Hall Farm Cottages Grade II listed (the current alignment is approximately 210m from these listed cottages) and to within 100m of Colby Hall Farm House Grade II listed (the current alignment is approximately 250m from this listed building). The proposed change of cable installation would also introduce a new works compound either side of Church Road which may influence the setting of these listed buildings albeit temporarily.
22. The proposed alternative has the potential to temporarily affect the setting of listed buildings either side of Church Road, which were not previously considered due to the distance of separation and nature of the works; however, this change would be temporary (up to 19 weeks) and would not represent a change to the significance of these features and no additional mitigation would be required.

## Landscape and Visual Impact

23. The section of Church Road, to the east of Banningham Hall, comprises road-side planting with a mix of tree species, ages and condition set along both sides and backed by hedgerow. Whilst the spacing of the trees is fairly regular in parts, and the hedgerows relatively complete, there are also substantial gaps which extend to approximately 10m to 18m between some trees. This irregularity in the spacing, size and condition prevents these road-side trees from presenting the key characteristics of a formal avenue.
24. In ES Chapter 29 LVIA [APP-242], the loss of these trees was assessed as a localised significant effect. This was in respect of the physical effect on the trees as landscape elements and did not relate to the perceived effect on landscape character, which would be very limited owing to the very small number of trees being removed, especially in proportion to the much wider abundance of tree cover in this area, but moreover, reflecting the limited change to the baseline character in which gaps in the tree cover already exist.
25. The current location of the open cut trench has been intentionally located in a section of Church Road where the trees occur intermittently on both sides of the road, so that any necessary removals could be accommodated without a notable

change in landscape character. With a width of 20-25m required for the running track junction in this location, it is predicted that four of the existing trees would need to be removed. The removals would comprise two immature trees on the eastern side of the road and one immature and one slightly more mature tree on the western side. These trees are roadside trees that are small to medium in size and lack the size and form of the more mature species that occur along other parts of the road-side.

26. The change brought about by the loss of these four trees would be relatively easily accommodated in this rural landscape, which is broadly modified by commercial farming. While the removals will add a new gap on either side of the road, the presence of other notable gaps to the north will ensure that these gaps will not notably alter the baseline character. Replacement planting of hedgerows would ensure the sense of enclosure on Church Road could be restored once the hedgerows matured. It is the intention that with careful micro-siting of the trenching that sufficient space would be available to enable some replacement tree planting within, albeit on the edges, of the Order limits.
27. The only visual receptors directly affected by the tree removals would be road-users, although they would be travelling at speed such that their views would be short term and transitory and the gaps would appear as a minor change in this local landscape.
28. The proposed realignment of the running track and change of cable installation method will affect residents who are currently unaffected by the proposals. In order to accommodate the proposed realignment of the running track two or three mature trees would need to be removed in the section of hedgerow opposite Banningham Hall Farm Cottages, which would change the visual amenity for these residents (see Figure A2).
29. The introduction of trenchless crossing compounds on either side of Church Road would also be readily visible from Banningham Hall, which has an open easterly aspect overlooking this area. The assessment findings in other sections of the cable route has been that the presence of trenchless crossing compounds has more potential to give rise to notable landscape and visual effects compared to open-cut trenching, owing largely to the more contained scale of the open cut trench.
30. As such, there is the potential for significant landscape and visual impacts to be experienced by residents of Banningham Hall Cottages (significant for 5-10 years as replacement trees become established) and for Banningham Hall (for the duration of the trenchless crossing works – approximately 10-12 weeks).





**Figure A2 - View looking north along Church Road in proximity to Banningham Hall Farm Cottages.** Realignment of running track would require the temporary removal of trees along the right hand side of the road opposite the existing access to Banningham Farm Cottages. This would change views experienced from Banningham Hall Cottage for 5-10 years as replacement trees establish.

### **Tourism and Recreation**

31. The proposed realignment for this section of running track and the change of cable installation method in this location do not increase impacts to any tourism and recreational assets, and there is no change to the significance assessed within the ES.

## Summary

32. Table A1 below provides a summary of the environmental constraints and opportunities presented by proposed realignment for this section of running track and the change of cable installation method.

**Table A1: Summary of Environmental Review**

(Red: environmental constraint which will require further consideration; Amber: environmental constraint which is an increase in that assessed within the ES, but which does not change the assessment presented in the ES; Green: environmental opportunity / reduction in impact assessed in ES; Blue: no change to assessment in the ES).

Receptor	Alternative Approach
Ground conditions and contamination	No change to the significance impacts assessed within the ES.
Water resources and flood risk	No change to the significance impacts assessed within the ES.
Land use and agriculture	Increase in the total area of Grade 2 agricultural land temporarily impacted by the works from 159.2ha to 160.6ha.  However, this does not increase the significance of any impacts assessed within the ES.
Ecology / ornithology	Potential impacts to roosting bats should they be present in mature trees that were not previously assessed.  No change to the significance impacts assessed within the ES.
Traffic and transport	The proposed realignment to the running track would introduce potentially significant safety risks to road users along Church Road without further detailed assessment and the identification of additional mitigation.
Noise and vibration	Potential for significant construction noise impacts at Banningham Hall Farm Cottages for up to 19 weeks, given the proximity of this noise sensitive receptor to both the works areas and the two proposed new road junctions (15m).  The full extent of this impact and mitigation would need to be considered through detailed noise assessment of the proposed activities.
Air quality	Brings the construction works to within 15m of Banningham Hall Farm Cottages. Any potential impacts would be mitigated through measures outlined in the ES. No change to the significance impacts assessed within the ES.
Archaeology and cultural heritage	Has the potential to temporarily affect the setting of listed buildings either side of Church Road that were not previously assessed due to the distance of separation.  No change anticipated to the significance impacts assessed within the ES.

Receptor	Alternative Approach
Landscape and visual impact	Trees can be replaced in the location they were removed opposite Banningham Hall Farm Cottages.
	Potential for significant landscape and visual impacts to be experienced by residents of Banningham Hall Cottages (significant for 5-10 years) due to trees being removed directly opposite this property and as replacement trees become established. In addition, Banningham Hall will have direct views of the trenchless crossing compound (for the duration of the trenchless crossing works – approximately 10-12 weeks) compared to the more contained activities of open cut trenching for a shorter period of time.
Tourism and recreation	No change to the significance impacts assessed within the ES.

## Access Layout Drawings



DESIGN TO INCORPORATE 15m RADII FOLLOWED BY A CORNER TAPER OF 1:10 OVER A DISTANCE OF 25M IN ACCORDANCE WITH DMRB CD123.

DESIGN TO INCORPORATE 15m RADII FOLLOWED BY A CORNER TAPER OF 1:10 OVER A DISTANCE OF 25M IN ACCORDANCE WITH DMRB CD123.

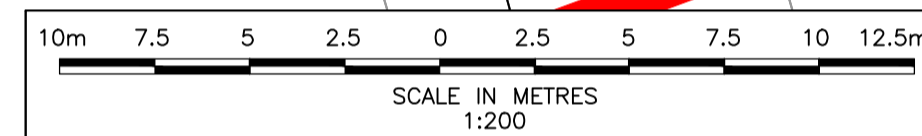
DEMARCATON BOLLARD

GIVE WAY SIGN TO DIAGRAM 602

GIVE WAY SIGN TO DIAGRAM 602

6m RADII FOR EMPLOYEE VEHICLES ARRIVING / DEPARTING FROM THE SOUTH

DESIGN TO INCORPORATE 15m RADII FOLLOWED BY A CORNER TAPER OF 1:10 OVER A DISTANCE OF 25M IN ACCORDANCE WITH DMRB CD123.

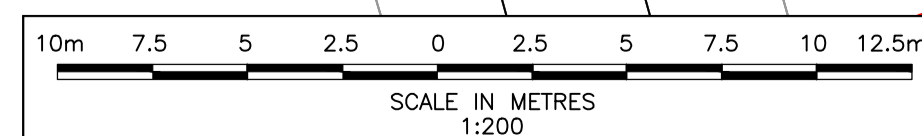


ACCESS LAYOUT  
SCALE - 1:200



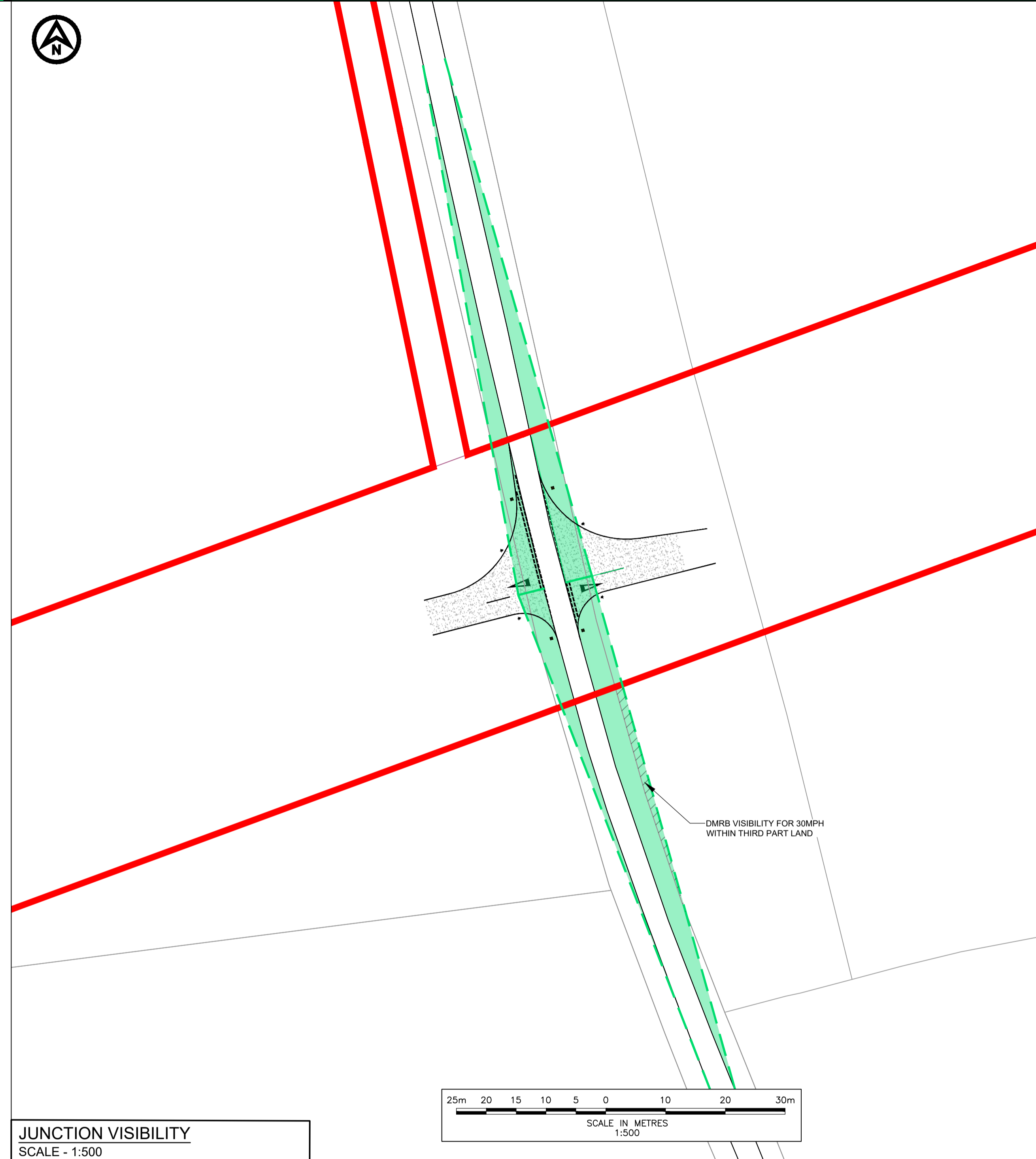
HGVs TO ARRIVE VIA THE NORTH ONLY AS PER HGV ROUTING CONTAINED WITHIN THE OTMP

HGVs TO USE MOBILE TRAFFIC MANAGEMENT ALONG COLBY ROAD (LINK 76)



ARTICULATED VEHICLE SPA (AC58)  
SCALE - 1:200

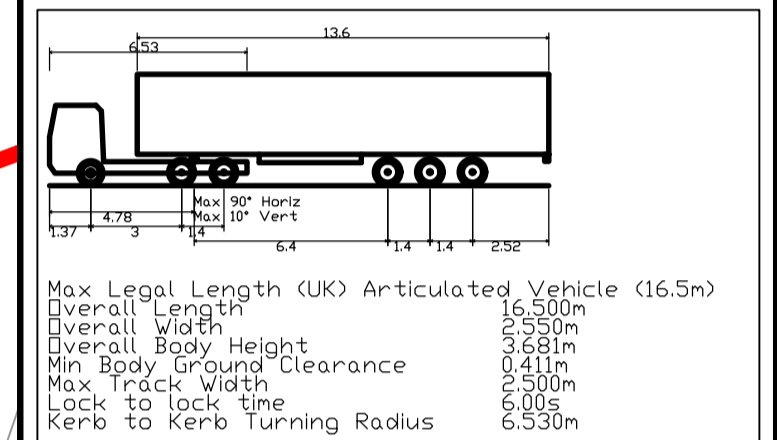
REPRODUCED FROM ORDNANCE SURVEY MAPS WITH PERMISSION FROM THE CONTROLLER OF HM STATIONERY OFFICE. CROWN COPYRIGHT RESERVED. LICENCE No. 100023422 2007.



JUNCTION VISIBILITY  
SCALE - 1:500

- NOTES**
- Do not scale from this drawing, all dimensions are in metres unless noted otherwise.
  - This drawing has been based upon Ordnance Survey Maps and Royal Haskoning can not guarantee the accuracy of data.
  - Road markings and road signs are to be in accordance with the SI document "Traffic Signs Regulations and General Directions, 2016".

- GENERAL KEY**
- DEVELOPMENT CONSENT ORDER LIMITS
  - PROPOSED ACCESS BOUND MATERIAL
  - PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
  - PROPOSED GATE
  - APPROXIMATE SIGN LOCATION
- VISIBILITY KEY**
- 2.4m x 90m (DMRB) VISIBILITY SPYLA FOR A 30MPH SPEED LIMIT
  - DMRB CLEAR VISIBILITY ENVELOPE
  - DMRB VISIBILITY ENVELOPE WITHIN THIRD PARTY LAND
- SWEPT PATH ANALYSIS KEY**
- VEHICLE BODY SWEPT PATH (FORWARD GEAR)
  - VEHICLE CHASSIS SWEPT PATH



**FOR CONSULTATION**

REV	DATE	DESCRIPTION	BY	CHK	APP

REVISIONS

CLIENT



PROJECT  
NORFOLK BOREAS  
OFFSHORE WIND FARM

TITLE  
CHURCH ROAD - AC58 ACCESS



DRAWN	RNE	CHECKED	ADR	APPROVED	ADR
DATE	23.01.2020	SCALE AT A1	1:500 UNO	CLIENTS REF.	
DRAWING No.	TP-PB5640-DR022	REVISION			
CLIENT DWG No.					F1.0



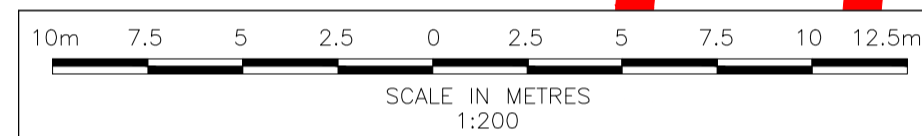
APPROXIMATE LOCATION OF EXISTING TELEGRAPH POLE TO BE RELOCATED

GIVE WAY SIGN TO DIAGRAM 602

GIVE WAY SIGN TO DIAGRAM 602

GIVE WAY SIGN TO DIAGRAM 602

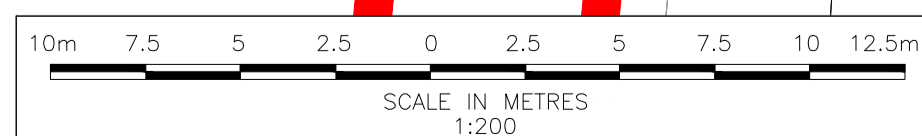
GIVE WAY SIGN TO DIAGRAM 602



HAUL ROAD CROSSING LAYOUT  
SCALE - 1:200



TWO-WAY HAUL ROAD CROSSING POINT



ARTICULATED VEHICLE SPA (AC58)  
SCALE - 1:200

REPRODUCED FROM ORDNANCE SURVEY MAPS WITH PERMISSION FROM THE CONTROLLER OF HM STATIONERY OFFICE. CROWN COPYRIGHT RESERVED. LICENCE No. 100023422 2007.

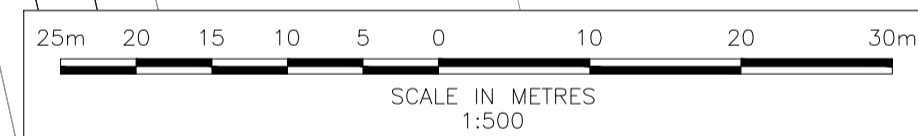


Hall Farm Cottages

A LARGE AREA OF VEGETATION CLEARANCE IS REQUIRED TO ACHIEVE THE REDUCED 30MPH SPEED LIMIT VISIBILITY SPLAYS TO THE SOUTH FOR CROSSING CONSTRUCTION TRAFFIC.

A THREE WAY TRAFFIC LIGHT MANAGEMENT SYSTEM COULD BE IMPLEMENTED DURING HOURS OF CONSTRUCTION IF AGREED WITH NCC.

COLBY ROAD TRAFFIC LIGHTS TO REST ON GREEN AND TURNING RED WHEN REQUESTED BY CONSTRUCTION TRAFFIC WAITING TO CROSS CHURCH ROAD.



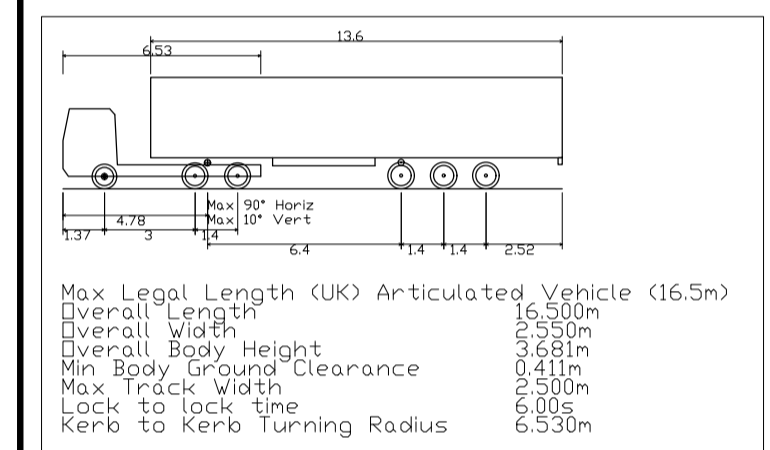
JUNCTION VISIBILITY  
SCALE - 1:500

- NOTES**
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  - This drawing has been based upon Ordnance Survey Maps and Royal Haskoning can not guarantee the accuracy of data.
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- GENERAL KEY**
- DEVELOPMENT CONSENT ORDER LIMITS
  - PROPOSED ACCESS BOUND MATERIAL
  - PROPOSED ACCESS BOUNDARY/ROAD MARKINGS
  - PROPOSED GATE
  - APPROXIMATE SIGN LOCATION

- VISIBILITY KEY**
- 2.4m x 90m (DMRB) VISIBILITY SPLAY FOR A REDUCED 30MPH SPEED LIMIT
  - DMRB CLEAR VISIBILITY ENVELOPE
  - DMRB VISIBILITY ENVELOPE WITHIN THIRD PARTY LAND
  - EXISTING ACHIEVABLE CLEAR VISIBILITY SPLAY (2.4m X 17.5m)

- SWEEP PATH ANALYSIS KEY**
- VEHICLE BODY SWEEP PATH (FORWARD GEAR)
  - VEHICLE CHASSIS SWEEP PATH



**FOR CONSULTATION**

REV	DATE	DESCRIPTION	BY	CHK	APP

REVISIONS

CLIENT



PROJECT  
NORFOLK BOREAS  
OFFSHORE WIND FARM

TITLE  
CHURCH ROAD - AC58 HAUL ROAD  
CROSSING ONLY



DRAWN	RNE	CHECKED	ADR	APPROVED	ADR
DATE	12.03.2020	SCALE AT A1	1:500 UNO	CLIENTS REF.	
DRAWING No.	TP-PB5640-DR044			REVISION	
CLIENT DWG No.				F1.0	