

RWE Renewables UK Dogger Bank South (West) Limited RWE Renewables UK Dogger Bank South (East) Limited

# Dogger Bank South Offshore Wind Farms

Arboricultural Survey Report, Preliminary Arboricultural Impact Assessment and Outline Arboricultural Method Statement (Revision 3) (Clean)

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Rev No.	Date	Status/Reason for Issue	Author	Checked by	Approved by
01	October 2024	Submission at Pre- Examination Procedural Deadline	Lampro	RWE	RWE
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Revision	Revision Change Log			
Rev No.	Page	Section	Description	
01	N/A	N/A	Submitted at Pre-Examination Procedural Deadline	
02	All	All plus Appendix 4 Appendix 5	Updated Appendix 4 and Appendix 5 to re-order the plans to align with the order of other plans already submitted to ensure consistency between the documents, in response to Action Point 3 from the Preliminary Meeting [EV2-002]. Sheet references re-numbered as a result.	
03	31 32/33 39/40 47 47 N/A N/A 51 85-92	Table 5-1 5.1.1 5.1.2 Table 5-3 6.2.3 6.2.4 Former 6.2.7 Former 6.2.8 New 6.2.7 Appendix 3	Updated to align with changes to the Onshore Substation Zone as a result of Project Change Request 2 [AS-152], to facilitate an update to Appendix 18-10 Biodiversity Net Gain Strategy [APP-1 for Deadline 5 alongside the updates to the Tree Preservation Order and Hedgerow Plan (Revision 5) [document reference 2.18].  Table 5-1, Table 5-3 and Section 6.2.3 and Section 6.2.7 have been amended as a result of a reduction in the number of trees to be removed as a result of Project Change Request 2 [AS-152].  Sections 5.1.2 and 6.2.4 have been amended to reflect reduced tree impacts from changes to drainage and earthworks.  Sections 6.2.7 and 6.2.8 have been deleted as no mitigation is now required for potential drainage impacts.	
03	33-36 51/52	Table 5-2 6.2.8	Errata corrected on review: Two category B trees and two category C trees have been added for possible removal which were missed in error from the previous revisions Further detail on TTPF has been added to Section 6.2.8.	
03	31 47	Table 5-1 6.2.3	Updated to commit to retaining tree T189 as shown on Sheet 7 of the Preliminary Tree Impact Plan, as stated in <b>The Applicants' Responses to Deadline 1 Documents</b> [REP2-058] in response to ERYC's response to Action Points from ISH2, Action Point 13.	
03	39/40 40 43/44	Table 5-3 5.3.1 6.1.4	Updated in response to The Woodland Trust Written Representation [REP1-090] and the Applicants response within <b>The Applicants' Responses to Written</b> Representations [REP2-057] whereby the Applicants' confirmed that trenchless crossing depths below ancient	







	52	6.2.9	woodland would be at a suitable minimum depth of 5m under the ancient woodland, unless the Applicants are able to demonstrate that a shallower depth is acceptable due to other constraints.
03	All	N/A	Section references have been updated where relevant throughout.
03	All	Appendix 5	Appendix 5: Preliminary Tree Impact Plans have been updated to reflect the above changes.







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### Glossary

Term	Definition
Ash Dieback	A disease affecting ash trees in the genus Fraxinus caused by the fungal pathogen <i>Hymenoscyphus fraxineus/Chalara fraxinea</i> .
Concurrent Scenario	A potential construction scenario for the Projects where DBS East and DBS West are both constructed at the same time.
Development Scenario	Description of how the DBS East and/or DBS West Projects would be constructed either in isolation, sequentially or concurrently.
Dogger Bank South (DBS) Offshore Wind Farms	The collective name for the two Projects, DBS East and DBS West.
Horizontal Directional Drill (HDD)	HDD is a trenchless technique to bring the offshore cables ashore at the landfall. It can also be used for crossing obstacles such as roads, railways and watercourses onshore.
In Isolation Scenario	A potential construction scenario for one Project which includes either the DBS East or DBS West array, associated offshore and onshore cabling and only the eastern Onshore Converter Station within the Onshore Substation Zone and only the northern route of the onward cable route to the proposed Birkhill Wood National Grid Substation.
Landfall	The point on the coastline at which the Offshore Export Cables are brought onshore, connecting to the Onshore Export Cables at the Transition Joint Bay (TJB) above mean high water.
Micro-siting	A method of avoiding or minimising impacts to trees by moving all construction activities and elements outside of tree canopies and Root Protection Areas.
Onshore Converter Stations	A compound containing electrical equipment required to transform HVDC and stabilise electricity generated by the Projects so that it can be connected to the electricity transmission network as HVAC. There will be one Onshore Converter Station for each Project.
Onshore Development Area	The Onshore Development Area for ES is the boundary within which all onshore infrastructure required for the Projects would be located including Landfall Zone, Onshore Export Cable Corridor, accesses, Temporary Construction Compounds and Onshore Converter Stations. (as shown on Volume 7, Figure 5-2 (application ref: 7.5.1).







Term	Definition
Onshore Export Cables	Onshore Export Cables take the electric from the Transition Joint Bay to the Onshore Converter Stations.
Onshore Export Cable Corridor	This is the area which includes cable trenches, Haul Roads, spoil storage areas, and limits of deviation for micro-siting. For assessment purposes, the cable corridor does not include the Onshore Converter Stations, Transition Joint Bays or temporary access routes; but includes Temporary Construction Compounds (purely for the cable route).
Onshore Substation Zone	Parcel of land within the Onshore Development Area where the Onshore Converter Station infrastructure (including the Haul Roads, temporary construction compounds and associated cable routeing) would be located.
Onward Cable Connection	The connection from the Converter Stations to the Birkhill Wood National Grid Substation.
Temporary Construction Access	The track along the Onshore Export Cable Corridor used by traffic to access different sections of the onshore export cable route for construction.
The Applicants	The Applicants for the Projects are RWE Renewables UK Dogger Bank South (East) Limited and RWE Renewables UK Dogger Bank South (West) Limited. The Applicants are themselves jointly owned by the RWE Group of companies (51% stake) and Masdar (49% stake).
The Projects	DBS East and DBS West (collectively referred to as the Dogger Bank South Offshore Wind Farms).
Veteran Tree Buffer Zone	A buffer zone for a veteran or ancient tree or ancient woodland whereby no development should occur. For ancient woodlands this is 15m from the edge of the woodland. For ancient and veteran trees, the buffer zone is either 15 times the stem diameter of the tree or 5m greater than the canopy spread, whichever is greater.







### **Acronyms**

Term	Definition
ACoW	Arboricultural Clerk of Works
ATI	Ancient Tree Inventory
BS5837:2012	British Standard 5837: 2012 'Trees in relation to design, demolition and construction – Recommendations'
CEZ	Construction Exclusion Zone
DBS	Dogger Bank South
DCO	Development Consent Order
HDD	Horizontal Directional Drilling
km	Kilometres
m	Metres
mm	Millimetres
OAMS	Outline Arboricultural Method Statement
NPPF	National Planning Policy Framework
NSIPs	Nationally Significant Infrastructure Projects
QGIS	Quantum Geographical Information System
RPA	Root Protection Area
TCC	Temporary Construction Compound
TPO	Tree Preservation Order
TTPF	Temporary Tree Protection Fencing
TPP	Tree Protection Plan







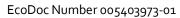
### 1 Introduction

### 1.1 Appointment

- Lanpro Services Ltd. was appointed by Royal HaskoningDHV, on behalf of the Applicants, to undertake an arboricultural assessment of the onshore elements of the Dogger Bank South Offshore Wind Farms Projects.
- The assessment comprised three parts. Firstly, a desk-based review of the Onshore Development Area (**Plate 1-1** below) including, but not limited to, a review of the layout information provided for the Onshore Substation Zone and Onshore Export Cable Corridor. Secondly, targeted tree surveys in areas where potential tree impacts were identified in the desk study and thirdly, a walkover of the Onshore Development Area to carry out a high-level tree survey to record ancient and veteran trees.
- 3. Lanpro Services was also instructed to provide an Outline Arboricultural Method Statement to set out the measures available to mitigate and compensate for identified arboricultural impacts.









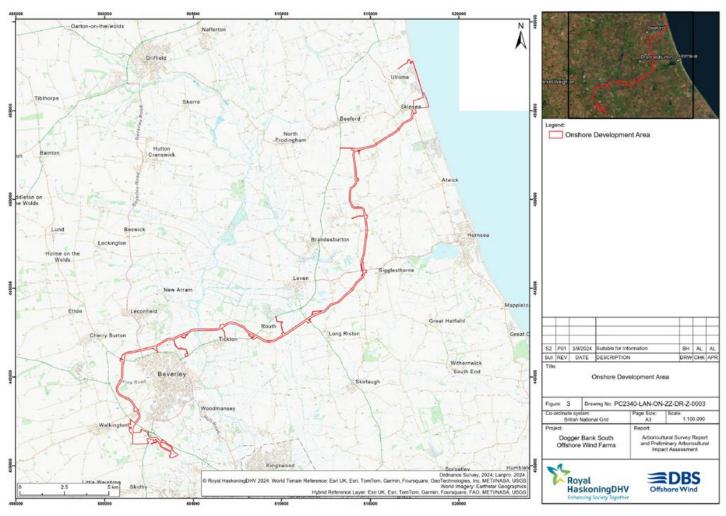


Plate 1-1 Onshore Development Area (outlined in red)







### 1.2 The Projects

- Dogger Bank South (DBS) Offshore Wind Farms is comprised of two separate projects: DBS East and DBS West (hereafter referred to as 'the Projects'). The Projects are both extensions of the existing Dogger Bank offshore windfarm located more than 100 kilometres (km) offshore in the southern North Sea near Skipsea in East Riding of Yorkshire. The Projects will deliver an estimated capacity of 3 Gigawatts (GW) once fully operational.
- 5. The Projects form the basis of a single Development Consent Order (DCO) application. The Projects have three potential 'Development Scenarios' whereby either DBS East and DBS West are constructed 'In Isolation', or DBS East and DBS West are constructed concurrently ('Concurrent Scenario'), or DBS East and DBS West are constructed sequentially ('Sequential Scenario'). These construction scenarios are described fully in **Chapter 5 Project Description** [APP-071]. For the purposes of this assessment, the Concurrent and Sequential construction scenarios are considered worst case as they would have the maximum construction footprint.
- 6. For this arboricultural report, only the onshore elements of the Projects are relevant. Key components of the construction include:
  - Onshore Export Cables which will make Landfall at Skipsea, East Riding of Yorkshire. The Onshore Export Cables will be installed over 32 kilometres (km) westwards and then southwards from Skipsea before passing around the north and west sides of the town of Beverley in East Riding of Yorkshire and terminating at the proposed Onshore Converter Stations. The Onshore Export Cable Corridor will be 75 metres (m) wide, widening to 90m at complex trenchless crossings. A mixture of open cut trenching and trenchless Horizontal Directional Drilling (HDD), or other trenchless techniques will be used to install the cables.
  - Depending on the Development Scenario followed, either two or four trenches will be required to install the power cables. Trench dimensions will be 1.1m wide at the base and 3.9m wide at the surface. The indicative burial depth for the cables will be 1.6m. For HDD, six ducts would be installed (three ducts per project for two power cables plus a smaller duct for a fibre optic communications cable).
  - Two Onshore Converter Stations will be constructed in a single location known as the Onshore Substation Zone to the south-west of Beverley. The Onshore Converter Stations will accommodate the connection of the Projects to the transmission grid. The Onshore Converter Stations will be accompanied by a permanent access road, a surface water drainage basin and drainage connection pipework.
  - To the south of the Onshore Substation Zone, cabling will be installed to connect the Onshore Converter Stations to the Birkwill Wood National Grid Substation. The Onward Cable Connection would be up to 100m wide to accommodate HVAC cables.





- There will be two main Temporary Construction Compounds (TCCs) along the Onshore Export Cable Corridor supported by 15 Satellite TCCs.
- Temporary Construction Access to the TCCs and the Onshore Export Cable Corridor will be 5m in width and 8m in width where passing places are required.
- Where DBS East and DBS West are built In Isolation, a permanent easement of 15m along the Onshore Export Cable Corridor will be required. Where, DBS East and DBS West are built together (either concurrently or sequentially) a 24m permanent easement will be required.
- 7. A full description of the Projects can be found in the **Environmental Statement, Chapter 5 Project Description** [APP-071].

### 1.3 Report Objectives

- 8. To provide the results of the tree survey and the preliminary arboricultural impact assessment of the Projects in regard to their potential impacts on existing individual trees, tree groups and woodlands.
- 9. The following schedule and drawings are to be read in conjunction within this report and are included as appendices:
  - Tree Survey Schedule (Appendix 1) provides the full results of the tree survey and the nature and quality of the existing tree stock within and adjacent to Onshore Development Area;
  - Definitions for Tree Survey Schedule (Appendix 2);
  - Site Photography (Appendix 3) illustrating examples of trees recorded;
  - Tree Constraints Plans (Appendix 4) illustrate the location of the surveyed trees, the assigned tree retention category (A, B, C and U), the canopy spread at the four cardinal points (north, south, east and west) and the extent of Root Protection Areas (RPA);
  - Preliminary Tree Impact Plans (Appendix 5) illustrate the known and possible tree removals, pruning and root impacts of the Projects; and
  - References (Appendix 6).
- 10. An Outline Arboricultural Method Statement has also been provided within this report to detail how any known or possible arboricultural impacts from the Projects will be avoided, mitigated or compensated for.







## 2 Legislation, Planning Policy and Guidance

### 2.1 UK Legislation

### 2.1.1 Town and Country Planning Act 1990 (as amended)

- 11. Part VIII of the Town and Country Planning Act (TCPA) 1990 places a duty on Local Planning Authorities:
  - "to ensure, wherever it is appropriate, that in granting planning permission for any development adequate provision is made, by the imposition of conditions, for the preservation or planting of trees; and to make such orders under section 198 as appear to the authority to be necessary in connection with the grant of such permission, whether for giving effect to such conditions or otherwise".
- Section 198 of the TCPA 1990 also empowers local planning authorities to make Tree Preservation Orders (TPOs) where it appears to be "expedient in the interests of amenity to make provision for the preservation or trees or woodlands in their area". The Town and Country Planning (Tree Preservation) (England) Regulations 2012 states that when a TPO is present on a tree, group of trees or woodland, it is an offence to:
  - Cut down, uproot of wilfully destroy that tree;
  - Top, lop or wilfully damage a tree in a way that is likely to destroy it; or
  - Cause or permit such activities.
- 13. A TPO does not prevent the reasonable management of trees or removal of trees for development. Trees subject to a TPO can be managed (for example branch removal) once an application for consent to carry out those works has been approved by the local planning authority. Applications are determined within eight weeks of validation. Similarly, trees subject to a TPO can be worked upon or removed for development (without the need for a tree works application) so far as such work is necessary to implement and has been consented as part of a full planning permission. A TPO does however prevent unauthorised removal or work to protected trees prior to full planning permission being granted or an application for tree work being consented.
- 14. Section 211 of the Town and Country Planning Act 1990 also preserves trees in Conservation Areas. A Conservation Area is designated by a local planning authority as "an area which has been designated because of its special architectural or historic interest, the character or appearance of which is desirable to preserve or enhance". Trees within a Conservation Area and not already covered by a TPO are protected from cutting down, topping, lopping, uprooting, wilful damage and wilful destruction when their stem diameter is greater than 75 millimetres as measured at 1.5 metres from ground level.







- To carry out work to a tree in a Conservation Area, a six-week notification must be provided to the local planning authority prior to works being carried out. The notification must identify the tree in question and describe the intended works to the tree. Once the six-week notification period has passed or the local planning authority issues a 'no objection' response to the proposed tree work, the tree work may then take place. Similarly to a TPO, works to trees in a Conservation Area can also take place (without the need for a six-week notification) to facilitate a development provided full planning permission is in place.
- 16. Exemptions exist to the requirement to make an application/submit a notification to undertake works to trees protected a TPO or Conservation Area respectively. An application or notification is not required for:
  - The removal of dead trees or dead wood (five days written notice to the local authority must be given to remove a dead tree covered by a TPO or Conservation Area designation);
  - The making safe of dangerous trees where there is an immediate risk of serious harm;
  - The minimum of work that is necessary to prevent or abate an actionable nuisance; and
  - Works necessary to implement a full and valid planning permission.
- 17. It should be noted that the Draft Development Consent Order [APP-027] for the Projects contains paragraphs 38 and 39 which provides the Applicants deemed consent to undertake tree works to trees protected by a TPO without the need for a prior application "if the undertaker reasonably believes it to be necessary to do so to prevent the tree or shrub from obstructing or interfering with the construction, maintenance or operation of the authorised project or any apparatus used in connection with the authorised project".

### 2.2 National Planning Policy

# 2.2.1 Overarching National Policy Statement for Energy (EN-1) (Designated January 2024) [Ref.3]

18. Paragraph 5.4.32 (Ancient Woodland and Veteran Trees) requires proposals to "include measures to mitigate fully the direct and indirect effects of development on ancient woodland, ancient and veteran trees or other irreplaceable habitats during both construction and operational phases".







19. Paragraph 5.11.27 of EN-1 requires existing trees and woodlands to be retained wherever possible. Paragraph 5.11.27 also states that "Mitigation may include, but is not limited to, the use of buffers" and "Where woodland loss is unavoidable, compensation schemes will be required, and the long-term management and maintenance of newly planted trees should be secured".

# 2.2.2 The National Policy Statement for Renewable Energy Infrastructure (EN-3) (Designated January 2024) [Ref.4]

20. Paragraph 2.10.100 requires proposals to "protect and retain, wherever possible, the growth of vegetation on site boundaries, as well as the growth of existing hedges, established vegetation, including mature trees within boundaries". Paragraph 2.10.101 of EN-3 also states that the impacts of a proposed development should be informed by a tree survey and arboricultural assessment.

# 2.2.3 National Planning Policy Framework (NPPF, 2023) [Ref.2]

- Paragraph 186 part c) states that: "development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.
- 22. It should be noted that in the context of DCO applications, the NPPF is only an important and relevant consideration and applications are decided in accordance with the National Policy Statements.

### 2.3 Local Policy

### 2.3.1 East Riding of Yorkshire District Council [Ref.5]

- 23. East Riding of Yorkshire Council has published its East Riding Local Plan 2012-2029 Strategy Document (adopted April 2016).
- The Local Plan includes useful context in paragraph 8.26 that states "East Riding has one of the lowest percentages of woodland cover in England, and, in particular, has very little ancient, or semi natural woodland. Therefore, where woodland is present it often makes an important contribution to the amenity of the landscape and landscape character".







- The Local Plan contains Policy ENV2: Promoting a High Quality Landscape. Of relevance to trees, this policy states "Development proposals should be sensitively integrated into the existing landscape, demonstrate an understanding of the intrinsic qualities of the landscape setting and, where possible, seek to make the most of the opportunities to protect and enhance landscape characteristics and features. To achieve this, development should... 3. Ensure important hedgerows and trees are retained unless their removal can be justified in the wider public interest".
- 26. Policy ENV3: Valuing Our Heritage also states that ancient trees are considered to be 'other non-designated assets' and have heritage value under the Policy. ENV3 states that "the significance, views, setting, character, appearance and context of heritage assets, both designated and non-designated, should be conserved.".
- 27. There are no Supplementary Planning Documents that pertain to trees.

### 2.4 Guidance

# 2.4.1 Natural England and Forestry Commission Standing Advice on Ancient Woodland, Ancient Trees and Veteran Trees [Ref.6]

- 28. This guidance is a material consideration for local planning authorities and advises the following for ancient and veteran trees and ancient woodland:
  - Recorded ancient woodland should be identified using Natural England's Ancient Woodland database [Ref.7] and veteran/ancient tree records should be checked via the Woodland Trust's Ancient Tree Inventory [Ref.8];
  - For ancient woodlands, a buffer zone of at least 15 metres from the boundary of the woodland is needed to avoid root damage. Where assessment shows that other impacts are likely to extend beyond this distance, a larger buffer zone will likely be required;
  - For ancient and veteran trees, the buffer zone should be at least 15 times larger than the diameter of the tree or five metres from the edge of the tree's canopy, whichever is greater; and
  - Buffer zones should contribute to wider ecological networks and be part of the green infrastructure of the area. Buffer zones should comprise semi-natural habitats. Development, including drainage infrastructure, should not be located within buffer zones.





# 2.4.2 Planning Policy Guidance for Tree Preservation Orders and Conservation Areas [Ref.9]

29. This guidance details how trees are protected by TPOs and Conservation Area designations and the exemptions to the need to apply for permission or notify the local planning authority of works to such trees. Much of the content has been summarised above in paragraphs relating to UK Legislation.

# 2.4.3 British Standard 5837:2012 'Trees in Relation to Design, Demolition and Construction (BS5837:2012) [Ref.10]

- 30. This guidance provides a framework for surveying trees and providing tree constraints information to inform the design of developments. It then provides guidance on the assessment, mitigation and compensation of arboricultural impacts and the arboricultural input needed at each stage of the Town and Country Act 1990 planning process. Whilst BS5837:2012 does not provide explicit guidance on DCO applications, it's approach and recommendations can be adapted and followed for the DCO process.
- BS5837:2012 states that when undertaking a tree survey for development, the arboriculturist must assess the quality of the trees and categorise each arboricultural feature as either Category A (a high quality tree), Category B (a moderate quality tree), Category C (a low quality tree/young tree) or Category U (a very low quality tree). Subcategories 1, 2 and 3 are then added to the categorisation to reflect the predominantly arboricultural, landscape and/or cultural/conservation value of the tree. BS5837:2012 states that veteran trees will "almost always be included in the A3 category", i.e. a high-quality tree with mainly conservation value.
- BS5837:2012 requires the following information to be recorded for each individual tree, group of trees or woodland:
  - Reference number (T = individual tree, G = group of trees, W = woodland);
  - Species (common name and scientific name);
  - Tree height;
  - Stem diameter measured at 1.5m height;
  - Branch spread at four cardinal points (north, east, south and west);
  - Existing height above ground level of a) first significant branch and direction of growth and b) canopy;
  - Life stage (young, semi-mature, early-mature, mature);
  - General Observations;
  - Estimated remaining contribution in years; and
  - Quality Category A-C and U.





BS5837:2012 then provides guidance on avoiding and minimising impacts to identified 33. arboricultural features such as siting all development outside of Root Protection Areas and canopy spreads in the first instance. Should development need to occur within Root Protection Areas or canopy spreads, guidance is provided on how to minimise impacts to the above and below ground parts of the tree through sensitive working methods, tree protection measures and arboricultural supervision.







## 3 Methodology

### 3.1 Desk Study

- Prior to undertaking tree surveys, a desk study was completed for the Onshore Development Area shown in above. The aim of the desk study was to identify any known protected trees (such as those protected by a TPO or Conservation Area designation) within the Order Limits or within 15m of the Order Limits as well as any known ancient and veteran trees and ancient woodlands within 50m of the Order Limits to inform the scoping of the tree survey effort.
- To obtain information on protected trees, East Riding of Yorkshire District Council's planning constraints map [Ref.11] was reviewed for details on the locations of TPO and Conservation Area designations. To obtain information on ancient and veteran tree records, The Woodland Trust's Ancient Tree Inventory [Ref.12] was reviewed. For information on the locations of ancient woodlands, Natural England's MAGIC Maps application [Ref.13] was reviewed.
- 36. Once the above information was collated, a review of the design of the Onshore Development Area was undertaken. The following design information was provided:
  - Obstacle Crossing Register confirming trenchless crossing e.g. HDD and open-cut sections for cable installation;
  - Temporary Construction Compound (TCC) locations;
  - Temporary Construction Accesses into fields for cable installation;
  - Onshore Converter Station Footprints;
  - Earthwork areas for the Onshore Converter Stations;
  - Drainage connections for the Onshore Converter Stations;
  - Drainage basin for the Onshore Converter Stations;
  - Permanent access roads for Onshore Converter Stations; and
  - Construction areas for the permanent access road for Onshore Converter Stations.
- 37. The review of protected and veteran tree information alongside the layout information and freely available Google Satellite (2024) aerial imagery allowed for 'pinch points' to be highlighted along the route where arboricultural impacts were expected or considered to be possible. For example, pinch points included where open cut trenching needed to cross lines of trees or where trees were visible on aerial imagery where new permanent infrastructure such as the Onshore Converter Stations would be constructed.
- 38. These pinch points were then subject to a BS5837:2012 tree survey to inform this preliminary arboricultural impact assessment. The review also allowed some sections of the Onshore Development Area to be scoped out from tree surveys, for example sections of the Onshore Export Cables which will be installed with HDD or sections where no trees were visible from aerial imagery.







### 3.2 BS5837:2012 Tree Surveys at 'Pinch Points'

- 39. A full tree survey in accordance with BS5837:2012 was carried out at the 38 of the 39 pinch points identified in the desk study.
- 40. The Site was surveyed by arboriculturists Alexander Lowe BSc (Hons) MArborA Dip Arb L4 (ABC) and Ho Ming Mak FdSc between April and July 2024.
- The following data was recorded for each arboricultural feature:
  - Reference number (T = individual tree, G = group of trees, W = woodland, \* = tree/tree group subject to a Tree Preservation Order);
  - Species (common name and scientific name);
  - Tree height in metres (to nearest half metre for dimensions up to 10m and nearest whole metre for dimensions over 10m);
  - Stem diameter measured at 1.5m height (to nearest 10mm);
  - Branch spread at four cardinal points north, east, south and west (to nearest half metre for dimensions up to 10m and nearest whole metre for dimensions over 10m);
  - Existing height above ground level of a) first significant branch and direction of growth and b) canopy;
  - Life stage (young, semi-mature, early-mature, mature, ancient);
  - General Observations;
  - Estimated remaining contribution in years (<10, 10-20, 20-40, 40+); and
  - BS5837:2012 quality category A-C and U.
- RPAs were calculated using the standard formulas provided in BS<sub>5</sub>8<sub>3</sub>7:2012 which provides an RPA circle with a radius 12 times the stem diameter of the tree. Veteran Tree Buffer Zones for ancient and veteran trees were calculated by multiplying the stem diameter of the tree by 15 or by adding 5m to the maximum canopy spread, whichever was larger.
- A3. No topographical survey was provided therefore tree positions were plotted on aerial imagery only, at a relative accuracy of 2-3m. The survey recorded all trees, groups of trees and woodlands within the Onshore Development Area or within 15m of the Onshore Development Area where trees had a stem diameter of 75mm or greater when measured at 1.5m height. Hedgerows were not recorded given that these had already been recorded by ecology surveys.
- 44. Tree height was measured using a Forestry Pro laser, canopy spreads were measured with a laser Distometer D110. Stem diameter was measured with a diameter at breast height measuring tape. Photographs were taken with a camera phone.





- Tree groups and woodlands were identified where trees formed cohesive arboricultural features. Principal trees within a group were plotted individually. Maximum stem diameters, tree heights and canopy spreads of the groups and woodlands were recorded. Insignificant trees (those with a stem diameter of less than 75mm at 1.5m height) were omitted from the survey.
- 46. All tree positions and constraints were mapped in Quantum Geographic Information System (QGIS) software [Ref.14].

### 3.3 High Level Tree Survey

- 47. For the remainder of the Onshore Development Area where no pinch points were highlighted, a high-level tree survey was undertaken.
- This involved an arboriculturist (A. Lowe or H. Mak) walking the Onshore Development Area and recording only ancient and veteran trees within the Order Limits or outside the Order Limits if the tree's buffer zone would overlap with the Order Limits.
- 49. Definitions used to assess whether a tree was ancient or veteran are shown below in **Table 3-1**.

Table 3-1 Definitions for Ancient and Veteran Trees and Ancient Woodland

	Definition	
Ancient Tree	An ancient tree is one that has passed beyond maturity and is old or aged in comparison with other trees of the same species. Definition as per the Ancient Tree Forum guidance [Ref.15].	
Veteran Tree	A veteran tree is a survivor that has developed some of the features found on an ancient tree, not necessarily as a consequence of time, but of its life and environment.	
	As per Natural England advice [Ref.16], the following are characteristics of a veteran tree; the more characteristics a tree has the stronger the indication that it is a veteran:	
	<ul> <li>Girth large for the tree species concerned</li> <li>Major trunk cavities or progressive hollowing</li> <li>Naturally forming water pools</li> <li>Decay holes</li> <li>Physical damage to trunk</li> <li>Bark loss</li> <li>Large quantity of dead wood in the canopy</li> </ul>	
	<ul> <li>Sap runs</li> <li>Crevices in the bark, under branches or on the root plate sheltered from direct rainfall</li> <li>Fungal fruiting bodies (e.g. from heart rotting species)</li> </ul>	







	Definition	
	<ul> <li>High number of interdependent wildlife species</li> <li>Epiphytic plants</li> <li>An 'old 'look</li> <li>High aesthetic interest</li> </ul>	
Ancient Woodland	An area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland and plantations on ancient woodland sites. Definition as per NPPF [Ref. 2].	

### 3.3.1 Survey Constraints and Limitations

- The positions of all trees, groups of trees and woodlands are estimated from aerial imagery only and are not based on a topographical survey. This is not considered to be a significant constraint to the project given that the accuracy of tree constraints (stem positions, Root Protection Areas and canopy spreads) is estimated to be within 2-3m.
- All pinch points were accessible for survey except for pinch point 1 near the Landfall at Skipsea. This is not considered to be a significant constraint to the survey or the impact assessment given that only one small tree (possibly a shrub) was visible on aerial imagery adjacent to the Onshore Development Area that may be impacted by a proposed Temporary Construction Access in this location.
- A very small number of land parcels were not accessible for the high level tree survey and in these instances surveyors viewed trees from nearby public viewpoints including roads, footpaths and Public Rights of Way and took a precautionary approach to recording ancient and veteran trees.
- This was a ground level visual assessment only. The assessment was for the purposes of planning and development. No internal decay detection tools have been used in this assessment; therefore, this was not a full health and safety assessment.
- The findings and recommendations contained within this report are valid for a period of two years from the date of survey.

### 3.4 Assessment of Arboricultural Impacts

The layout information for the Projects, as detailed in paragraph 40 above was overlaid on to the stem positions, RPA, canopy spreads and veteran buffer zones mapped in QGIS.







- 56. Arboricultural impacts were then assessed and categorised into two distinct categories:
  - 'Known' arboricultural impacts; and
  - 'Possible' arboricultural impacts.

#### 3.4.1 'Known' Arboricultural Impacts

Tree constraints which overlapped with the Onshore Substation Zone, permanent access roads, drainage basin, drainage connections, earthworks areas, Temporary Construction Accesses and Temporary Construction Compounds have been identified as requiring removal, tree pruning or as suffering root impacts as relevant. Given that the locations of these onshore components are fixed, these constitute 'known' arboricultural impacts.

### 3.4.2 'Possible' Arboricultural Impacts

- For the remainder of the Onshore Development Area where open cut trenching is proposed, it is not known exactly where the Onshore Export Cables will be installed within the 75m or 90m Onshore Export Cable Corridor or within the 100m Corridor for the Onward Cable Connection. As per paragraphs 299 and 300 of Chapter 5 Project Description [APP-071], where open cut trenching will cross hedgerows and lines of trees, a minimum working corridor for trenching will be 15m for the In Isolation Development Scenario and 20m for the Concurrent/Sequential Development Scenario. South of the Onshore Substation Zone, along the Onward Cable Connection a minimum working corridor of 24m for the In Isolation Development Scenario and 34m for the Concurrent/Sequential Development Scenario will be required.
- Therefore, the worst-case scenario in terms of working corridor width for the Onshore Export Cables will be 20m from Skipsea to the Onshore Substation Zone and 34m from the Onshore Substation Zone to the southern tip of the Onshore Development Area.
- 6o. For the purposes of this arboricultural impact assessment, a precautionary approach has been followed whereby all arboricultural features which a working corridor may need to pass through have been identified as potentially requiring removal. In practice during construction, a 24m working corridor will be mico-sited on a case by case basis with arboricultural constraints forming one of the factors that determine the final route of the Onshore Export Cable Corridor. This would increase to 34m at the widest sections of the Onward Cable Connection from the Substation Zone to the Proposed Birkhill Wood National Grid Substation. These arboricultural impacts are therefore considered to be 'possible arboricultural impacts' and may change during construction.
- Due to the many 'possible' arboricultural impacts, this impact assessment is considered to be a preliminary Arboricultural Impact Assessment.





### 4 Site Description and Results

### 4.1 Site Description

- 62. The Onshore Development Area comprises predominantly agricultural land as well as roads to serve as accesses to fields. The Onshore Development Area also includes a stretch of beach at Skipsea where the Onshore Export Cables will make Landfall.
- 63. The Onshore Export Cable Corridor is 75m wide from Landfall to the Onshore Substation Zone, widening to 90m at complex trenchless crossings. From Landfall near Skipsea, the Onshore Export Cable Corridor travels west crossing Hornsea Road (B1242), and continuing to Dunnington Lane before turning and heading south past Dunnington, Nunkeeling, Catfoss, and across West Road (A1035) at Sigglesthorne.
- The Onshore Export Cable Corridor then turns south-west and continues past the village of Riston Grange, crossing Whitehorse Road (A165) and again crossing Hornsea Road (A1035) as it heads west north of Tickton. The route then crosses Driffield Road (A164) to the north of Beverley before turning south to cross Constitution Hill (A1035) to the west of Beverley, down across York Road, Newbald Road, and Broadgate (B1230), before reading the Onshore Substation Zone located at Beverley Road along the A1079 and A164.
- 65. Trees are mostly confined to field boundaries, beside roads and within the gardens of adjacent residential properties and private land.
- 66. At the Onshore Substation Zone, there is an area of ancient woodland surrounded by agricultural land with trees along field boundaries. There are also two further areas of woodland immediately adjacent to the Onshore Substation Zone which are not registered as ancient woodland.

### 4.2 Desk Study Results

67. **Table 4-1** below summarises the results of the desk study of the Onshore Development Area and within 15m of the Onshore Development Area.

Table 4-1 Summary of Desk Study Results

Feature	Number of Features and Description
TPOs	1TPO Present –TPO 259 (Former Broadgates Hospital) is located directly adjacent to the Onshore Development Area to the south-west of Beverley and south of the A1230 (National Grid reference: TA 0184 3794) as shown in <b>Preliminary Tree Impact Plan 25 of 27 in Appendix 5.</b> This area Order protects all trees present in the TPO area in the year the TPO was made.
	The stems of the trees protected by TPO 259 (G23*, G24* and G25*) are all located either within private gardens or in an amenity space separated from the Onshore







Feature	Number of Features and Description		
	Development Area by boundary fencing (Photograph 1, Appendix 3). The canopies and RPAs of the protected trees do overlap the Onshore Development Area.		
Conservation Areas	None		
Recorded Ancient Trees	None		
Recorded Veteran Trees	One veteran tree record was found within the Onshore Development Area and a further two veteran tree records were found within 50m of the Onshore Development Area as shown in <b>Plate 4-1</b> below. Two 'notable' tree records were also present within 50m of the Onshore Development Area as shown in below.		



Plate 4-1 Ancient and Veteran Tree Records with the Onshore Development Area (latter shown outlined red)

The veteran tree within the Onshore Development Area is listed as a veteran oak 68. Quercus robur with a unique identification number of 112891 on The Woodland Trust's Ancient Tree Inventory (ATI). Its entry on the ATI states that the oak is a maiden tree, alive and with a girth of 2.95m at a height of 1.5m. The tree's National Grid Reference is TA 03617 35818.







- During the tree survey, this oak was recorded as To8o (see Tree Constraints Plan Sheet 27 of 27 in Appendix 4) and was not found to meet the criteria (see **Table 3-1** above) to be classified as a veteran tree. The tree was a mature individual with standing deadwood and a thinning canopy (Photograph 2, Appendix 3). The oak did not have any visible stem hollowing or other veteran features such as crown retrenchment or an abundance of cavities, fungal associates or other habitat features. It has therefore not been categorised as a veteran within this assessment.
- 70. Two veteran oaks (unique identification numbers on the ATI: 114227 and 114225) are located 42m and 51m from the Onshore Development Area as shown in **Plate 4-1** Given the distance between these trees and the Order Limits, these trees were not recorded during the tree survey and they are assumed to still be present.
- The two 'notable' trees recorded on the ATI are both English elm *Ulmus minor* 'Atinia'.

  These trees were recorded to have a stem girth of 0.95m and 1.05m at 1.5m height which likely makes them semi-mature. It is assumed that these trees have been recorded as 'notable' due to their species as surviving English elm are relatively rare in the landscape following Dutch elm disease. These trees could not be found by the surveyor during the tree survey and are therefore assumed to be absent.

### 4.3 Tree Survey Results

- A total of 256 individual trees, 53 group of trees and three woodlands were recorded in the survey as summarised in **Table 4-2** below. All data collected is presented in the Tree Survey Schedule in Appendix 1 and summarised in below. Tree photos can be found in Appendix 3.
- 73. Twenty-three (23) high quality Category A individual trees were recorded consisting mainly of early mature to mature Oak *Quercus robur*, Ash *Fraxinus excelsior* and several sycamores *Acer pseudoplatanus*. One (1) Category A tree group (G25\* which is also subject to a TPO) and one (1) Category A woodland (W1 an ancient woodland near the Onshore Substation Zone) were also present.
- 74. Sixty-three (63) moderate quality Category B individual trees were recorded consisting mainly of oak, sycamore and ash. Additional species including beech Fagus sylvatica, pear Pyrus domestica, field maple Acer campestre, crab apple Malus sylvestris, horse chestnut Aesculus hippocastanum, Lombardy poplar Populus nigra 'Italica' and Turkey oak Quercus cerris were also recorded occasionally.
- 75. Twenty-nine (29) moderate quality Category B tree groups and two woodlands were recorded. Both woodlands were located near the Onshore Substation Zone and are not registered as ancient. W2 was found to be a semi-early mature plantation dominated by sycamore whilst W3 was dominated by Scots pine *Pinus sylvestris* and Norway spruce *Picea abies*. Tree groups were varied and largely consisted of native species along field boundaries.







- 76. The highest number of trees recorded in the tree survey were low quality Category C individual trees and tree groups. These trees are predominantly young ash, oak, sycamore, semi to early mature silver birch Betula pendula, goat willow Salix caprea, field maple and mature hawthorn Crateagus monogyna, elder Sambucus nigra and blackthorn Prunus spinosa growing on field boundaries and along access roads.
- 77. Thirteen (13) very low-quality Category U individual trees were recorded in addition to two Category U tree groups. These included semi-mature, early mature and mature ash that were found to have very low crown vitality and displaying symptoms of crown dieback likely due to Ash Dieback. Several field maple, sycamore and an elder specimens were also recorded as Category U. The two Category U groups mainly consisted of dead trees.
- 78. Overall, there were nine individual veteran trees, and one ancient woodland recorded from the tree survey. The nine veteran trees are: To4o ash (Tree Constraints Plan 26 of 27), To76 ash (Tree Constraints Plan 27 of 27), To78 ash (Tree Constraints Plan 27 of 27), To99 ash (Tree Constraints Plan Sheet 20 of 27), T111 ash (Tree Constraints Plan Sheet 18 of 27), T142 ash (Tree Constraints Plan Sheet 11 of 27), T150 ash (Tree Constraints Plan 12 of 27), T252 ash (Tree Constraints Plan Sheet 14 of 27) and T253 oak (Tree Constraints Plan Sheet 10 of 27). All veteran trees were found to have significant stem hollowing and a variety of additional features such as a significant standing and fallen deadwood, cavities, fissures and crown retrenchment. One tree, T111 ash, was found to have several owl pellets within the stem hollow.
- 79. The ancient woodland W1 was dominated by sycamore with frequent silver birch (Photograph 3, Appendix 3), oak and goat willow. Trees were mostly early mature within the woodland and a single veteran tree was found on the east side of the woodland (To4o ash).

Table 4-2 Summary of Tree Classification

BS5837:2012 Quality	Number		
Category	Individual Trees	Tree Groups	Woodlands
A (high quality)	23	1	1
B (moderate quality)	63	29	2
C (low quality or young)	157	21	0
U (very low quality)	13	2	0







## 5 Preliminary Impact Assessment

### 5.1 Known Arboricultural Impacts

### 5.1.1 Tree Removals

8o. The following trees in **Table 5-1** below are known to require removal in order to facilitate the construction of Temporary Construction Accesses, Temporary Construction Compounds and the Onshore Substation Zone including the Onshore Converter Stations and their permanent access road and earthworks.

Table 5-1 Summary of Known Tree Removals

BS <sub>5</sub> 8 <sub>3</sub> 7:2012 Quality Category	Tree Reference	Preliminary Tree Impact Plan Reference
Category A trees and tree groups	To21 oak (Photographs 4 and 5, Appendix 3)	Sheet 26 of 27
Category B trees and tree	To2o oak	Sheet 26 of 27
groups	T246 sycamore	Sheet 9 of 27
	Go1 (partial removal of approximately 55m length)	Sheet 26 of 27
	G12	Sheet 25 of 27
Category C trees and tree	Too5 sycamore	Sheet 26 of 27
groups	Tog6 goat willow	Sheet 20 of 27
	Tog7 goat willow	Sheet 20 of 27
	Tog8 horse chestnut	Sheet 20 of 27
	T188 ash	Sheet 7 of 27
	Go2 (partial removal)	Sheet 26 of 27
Category U trees and tree groups	G05	Sheet 26 of 27

81. To21 is also an early mature oak, open grown and noted to have a raptor box installed in its crown.







- 82. All the above trees are shown for removal in the relevant Preliminary Tree Impact Plans in Appendix 5 as referenced. None of the above listed trees to be removed are veteran or ancient nor are they protected by a TPO or Conservation Area designation.
- 83. Compensatory tree planting of open grown trees will be required. To prevent future root damage to cables, no trees will be planted within the cable easement of the Onshore Export Cable Corridor. Locations for tree planting will be identified in the final Landscape Management Plan. Trees which are removed will be replaced with locally native species to match those removed, where feasible, as detailed in the Outline Ecological Management Plan [APP-235].

### 5.1.2 Root and Canopy Impacts

- 84. Without mitigation, the following impacts to the roots and canopies of retained trees are anticipated.
- 85. The Root Protection Areas and canopy spreads of Category A tree To19 oak and a 90m section of Category B tree group Go1 will be incurred during the installation of the permanent access road to the Onshore Converter Station(s) Preliminary Tree Impact Plan Sheet 26 in Appendix 5). Approximately 88m² of To19's RPA will be impacted which equates to 37% of its RPA and earthworks may extend to within 1.5m of the tree's stem. Road earthworks near to Go1 approximately extend to within 2.5m of tree stems. Within RPAs, soil levels are likely to be raised to form a batter down from the road. The addition of soil may create anaerobic conditions within To19 and Go1's RPAs. Minor tree pruning may also be required to facilitate the access road works. Together, the combined impacts to the roots and canopies of these trees may lead to a negative impact on the short to medium term canopy health of these trees and may shorten their life expectancies. Mitigation is provided in section 6.2.4 which if followed will minimise pruning impacts to To19 and Go1 however a minor negative residual impact to To19 oak is still anticipated due to RPA encroachment.
- 86. Root impacts to Category A veteran tree T142 ash (Photograph 9, Appendix 3) and Category C tree T143 ash, located on Sheet 11 of the Preliminary Tree Impact Plan, located in Appendix 5 are anticipated from the installation of a TCC within their RPAs which will cover approximately half of each tree's RPA. Both trees' roots will be significantly negatively impacted by soil compaction and tree stems and branches may be damaged by machinery or vehicle movements. Mitigation is provided in section 6.2.13 which will result in a neutral residual impacts to T142 ash and T143 ash.







- 87. There is a small incursion (32m² or 4%) into the Veteran Tree Buffer Zone of To76 ash and into the RPA of Category U tree To75 ash (17m² or 5%) for an indicative Temporary Construction Access, located on Sheet 27 of the Preliminary Tree Impact Plan, located in Appendix 5. The indicative access is 12m from To76's stem and 8m from To75's stem. Minor negative impacts to the roots of To76 ash are anticipated at most due to possible soil compaction within the Veteran Tree Buffer Zone, neutral impacts to To75 are anticipated. It should be noted that the area of incursion is currently arable land which is already subject to farm machinery movements and soil disturbance. Mitigation is provided in section 6.2.12 which will result in a neutral residual impact to To76 ash.
- 88. Root impacts may also result from minor RPA incursions (<7% total RPA) to Category B trees To53 oak and To55 oak for the Onshore Substation Zone Temporary Construction Compound, located on Sheet 25 of the Preliminary Tree Impact Plan, located in Appendix 5. Trees may suffer soil compaction within the affected parts of the RPAs which may affect canopy vitality. Tree stems and branches may also be damaged by machinery coming into contact with them or materials being stored against tree stems. Mitigation is provided in section 6.2.13 which will result in a neutral residual impacts to To53 oak and To55 oak.

### 5.2 Possible Arboricultural Impacts

#### 5.2.1 Tree Removals

89. The following Category B and C tree removals in **Table 5-2** below are possible within the open cut trenching sections of the Onshore Development Area. **Table 5-2** shows a precautionary assessment of potential tree removals and does not account for mitigation such as micro-siting of the working corridor during construction.

Table 5-2 Summary of Possible Tree Removals

BS5837:2012 Quality Category	Tree Reference	Preliminary Tree Impact Plan Reference
Category B trees and tree	To8o oak	Sheet 27 of 27
groups	To79 oak	Sheet 27 of 27
	Go8 (partial removal of 30m)	Sheet 26 of 27
	To82 sycamore	Sheet 25 of 27
	To83 sycamore	Sheet 25 of 27
	T118 oak	Sheet 19 of 27
	T119 oak	Sheet 19 of 27







BS <sub>5</sub> 8 <sub>3</sub> 7:2012 Quality Category	Tree Reference	Preliminary Tree Impact Plan Reference
	T120 oak	Sheet 19 of 27
	T148 ash	Sheet 12 of 27
	T164 ash	Sheet 12 of 27
	T165 field maple	Sheet 12 of 27
	T184 crab apple	Sheet 7 of 27
	T185 apple	Sheet 7 of 27
	T186 crab apple	Sheet 7 of 27
	G19	Sheet 27 of 27
	G21 (partial removal of 60m linear extent)	Sheet 25 of 27
	G20	Sheet 25 of 27
	G27	Sheet 24 of 27
	G29	Sheet 21 of 27
	G44	Sheet 10 of 27
	G45	Sheet 7 of 27
	G46	Sheet 7 of 27
Category C trees and tree	To81 goat willow	Sheet 27 of 27
groups	To 48 haw thorn	Sheet 26 of 27
	To49 hawthorn	Sheet 26 of 27
	To84 elder	Sheet 25 of 27
	To85 sycamore	Sheet 25 of 27
	Tog2 hawthorn	Sheet 22 of 27
	Tog3 blackthorn	Sheet 22 of 27







BS <sub>5</sub> 8 <sub>3</sub> 7:2012 Quality Category	Tree Reference	Preliminary Tree Impact Plan Reference
	Tog4 hawthorn	Sheet 22 of 27
	Tog5 hawthorn	Sheet 22 of 27
	T144 ash	Sheet 12 of 27
	T145 ash	Sheet 12 of 27
	T146 ash	Sheet 12 of 27
	T147 oak	Sheet 12 of 27
	T149 horse chestnut	Sheet 12 of 27
	T154 ash	Sheet 11 of 27
	T155 field maple	Sheet 11 of 27
	T156 field maple	Sheet 11 of 27
	T157 elm	Sheet 11 of 27
	T158 hawthorn	Sheet 11 of 27
	T159 ash	Sheet 11 of 27
	T161 ash	Sheet 11 of 27
	T162 ash	Sheet 11 of 27
	T166 ash	Sheet 11 of 27
	T179 ash	Sheet 10 of 27
	T180 ash	Sheet 10 of 27
	T181 ash	Sheet 10 of 27
	T182 ash	Sheet 7 of 27
	T183 oak	Sheet 7 of 27
	T187 ash	Sheet 7 of 27
	T247 ash	Sheet 8 of 27





BS5837:2012 Quality Category	Tree Reference	Preliminary Tree Impact Plan Reference
	T248 elder	Sheet 8 of 27
	T249 ash	Sheet 8 of 27
	T250 ash	Sheet 8 of 27
	T251 ash	Sheet 8 of 27
	G28	Sheet 22 of 27
	G <sub>3</sub> 8	Sheet 11 of 27
	G49	Sheet 9 of 27
	G <sub>5</sub> 1	Sheet 8 of 27
	G <sub>52</sub>	Sheet 8 of 27
Category U trees and tree	T160 field maple	Sheet 11 of 27
groups	G <sub>37</sub>	Sheet 11 of 27

- 90. Compensatory tree planting of open grown trees will be required. To prevent future root damage to cables, no trees will be planted within the cable easement of the Onshore Export Cable Corridor. Locations for tree planting will be identified in the final Landscape Management Plan. Trees which are removed will be replaced with locally native species to match those removed, where feasible, as detailed in the Outline Ecological Management Plan [APP-235].
- Open cut trenching may also need to occur within the RPAs of retained trees which may result in root damage or loss. Depending on the proximity of trenching to tree stems, root damage may result at worst in tree instability and remedial works being necessary such as tree removal or pruning, particularly where affected trees are next to 'targets' such as highways, structures or footpaths. More minor root impacts would result in the loss of fibrous roots and may affect the vitality and longevity of retained trees. Mitigation is provided in section 6.2.88 which will minimise tree losses and reduce the severity of impacts to the health and longevity of retained trees.
- Movements of machinery and piling of spoil next to trenches may also occur within the RPAs of retained trees and lead to soil compaction and loss of tree vitality.

  Mitigation is provided in sections 6.2.1010 and 6.2.11 which will result in neutral residual impacts to retained trees that may have been affected by soil compaction.







93. Tree pruning may be required to retained trees to create sufficient clearance for machinery to pass within the working corridor. This may result in branch loss and loss of visual amenity for some trees as well as branch wounding which may allow in fungal decay pathogens that shorten the life expectancy of the tree. Mitigation is provided in section 6.2.4 to reduce the likelihood of tree pruning to higher value trees and ensure minor residual impacts to pruned trees at most.

#### 5.2.2 Root and Canopy Impacts

#### 5.2.2.1 Temporary Construction Access

- Possible to Category B tree groups G30 and G31 as well as Category A veteran ash T099 (Photograph 10, Appendix 3) from the installation of a Temporary Construction Access within their RPAs as shown in Preliminary Tree Impact Plan, Sheet 20 in Appendix 5. The haul road will need to be 5m in width or 8m in width where passing places are required. Next to these trees there is more than 5m within the Order Limits to accommodate an access that would avoid G31 and T099's RPAs.
- 95. A Temporary Construction Access will also be potentially created within the RPAs of Category B trees T139 field maple and T140 ash and Category C trees: T136, T137, T138 and T141 ash as shown on Sheet 15 of the Preliminary Tree Impact Plan, located in Appendix 5There is sufficient space within the Order Limits to install a 5m wide access outside the RPAs of these trees therefore mitigation will be required to avoid root impacts to these trees from the installation of the access road.
- 96. Mitigation which commits to avoid incursions into RPAs is provided in section 6.2.122 and therefore neutral residual impacts to G30, G31, T099 ash, T139 field maple, T140 ash, T136 ash, T138 ash and T141 ash are expected.

#### 5.2.2.2 Working Corridor

- 97. Root impacts are possible to veteran ash tree T150 should the working corridor encroach into the RPA and Veteran Tree Buffer Zone as shown Sheet 12 of the Preliminary Tree Impact Plan, located in Appendix 5. The tree is located to one side of the Order Limits and there is a 70m width of space to the north-west of the tree to accommodate a working corridor therefore with mitigation in place as per section 6.2.8, neutral residual impacts to T150 are anticipated.
- 98. More generally, all trees along the route may be impacted by soil compaction within RPAs from vehicle passes and spoil loading, canopy pruning to facilitate construction traffic access and potentially stem and branch damage from machinery working in close proximity to trees.





#### 5.2.2.3 Works to Roads to Facilitate Vehicular Access

- 99. **Volume 7, Chapter 24 Traffic and Transport (application ref: 7.24)** identifies on page 135 the need to widen some roads and/or install passing places to allow better access for HGV traffic associated with the Projects. The following highway works will be required:
  - Dunnington Lane extend existing passing places to provide additional space for HGVs (Photograph 11, Appendix 3);
  - Eske Lane new passing places for HGVs to be provided and/or existing passing places extended (Photograph 12, Appendix 3);
  - Ings Road The road may be widened or an escort vehicle will be used for HGVs;
     and
  - Unnamed Road north of the A1035 (West Road) opposite Catwick Heads localised road widening or escort vehicle for HGV (Photograph 13, Appendix 3).
- 100. Potential arboricultural impacts from these road works include tree removal, root loss from excavation within the RPAs of existing trees and canopy pruning. Mitigation will be required to avoid and minimise the extent of impacts to trees as per section 6.2.14. Compensatory tree planting will be required to replace any removed trees.
- 101. Tree removal or pruning may also need to occur at access points into fields to ensure the access is wide enough for construction traffic.

#### 5.2.2.4 Trenchless Crossings

The use of trenchless crossings e.g. HDD along the route (as shown in the Preliminary Tree Impact Plans, located in Appendix 5) is unlikely to result in significant arboricultural impacts given that cable will be inserted underneath trees. Entry and exit pits for HDD machinery, or other trenchless technology will be required at each end of the trenchless section of the route which will be located within fields where they can avoid perimeter trees. Provided trenchless depths exceed 1m underneath retained trees, no impacts to trees are anticipated where HDD is used to install cables along the route.

# 5.3 Summary of Known and Potential Arboricultural Impacts and Required Mitigation and Compensation

Table 5-3 below provides a summary of the above preliminary arboricultural impact assessment. Mitigation and compensation will be required for identified arboricultural impacts as outlined in Table 5-3 below. Options for mitigation and compensation are detailed in the Outline Arboricultural Method Statement provided in section 6.







Table 5-3 Summary of Arboricultural Impacts and Required Mitigation and Compensation

	Construction Stage	Arboricultural Impact	Mitigation/Compensation Options
	Installation of Onshore Substation Zone and associated permanent access road	Loss of 3 individual trees and full or partial loss of four tree groups.	Compensatory tree planting
	Temporary Construction Accesses	Removal of 4 individual trees.	Compensatory tree planting
Known Impacts	Temporary Construction Compounds	Loss of one individual tree, Root and canopy impacts to Category A veteran tree T142 ash, two Category B trees (To53 and To55) and one Category C tree T143 ash from compounds being installed within RPAs.	Tree Protection Barriers around these trees' RPAs/Veteran Tree Buffer Zones and installation of TCCs outside of these barriers.  Maintain barriers whilst TCCs are active.
	Open cut trenching for Onshore Export Cables' installation	Removal of 13 individual Category B trees and 9 Category B tree groups, 34 individual Category C trees and 5 Category C tree groups and 1 Category U tree and 1 Category U tree group.	Micro siting around Category A and B trees in addition to compensatory tree planting.
		Root and canopy impacts from trenching next to retained trees.	Micro siting around Category A and B trees and precautionary working methods within RPAs.
		Soil compaction within RPAs of retained trees near working corridor including veteran ash T150.	Tree Protection Barriers in place to protect RPAs during works.
Possible Impacts	Temporary Construction Accesses	Soil compaction and loss of vitality for Category A veteran ash Togg, Category B trees G30, G31, T139 field maple and T140	Mico siting Temporary Construction Accesses outside of RPAs of these trees to prevent soil compaction.







Construction Stage	Arboricultural Impact	Mitigation/Compensation Options
	ash and Category C trees T136, T137, T138 and T141 ash.	
Road widening/construction of passing places	Tree removal/root loss/canopy pruning	Sensitive design of road widening and location of passing places to avoid RPAs of Category A and B trees. Compensatory planting if required.
Access into fields for construction traffic	Tree removal/root loss/canopy pruning	Sensitive design of accesses to avoid RPAs of Category A and B trees. Compensatory planting if required.
Trenchless Techniques e.g. HDD	Tree removal/pruning/root impacts including trenchless crossing e.g HDD under ancient woodland	Sensitive design of trenchless crossings entry/exit point locations away from trees.  Trenchless crossing techniques such as HDD at a suitable minimum depth of 5m under the ancient woodland, unless the Applicants are able to demonstrate that a shallower depth is acceptable due to other constraints.

## 5.3.1 Summary of Impacts to Ancient and Veteran Trees and Protected Trees

- The preliminary arboricultural impact assessment above has not identified any ancient trees, ancient woodlands, veteran trees or protected trees that require removal in order to facilitate the Projects.
- Nevertheless, without any mitigation several potential impacts to veteran trees and the ancient woodland W1 have been identified in this assessment. These are:
  - Trenchless crossing techniques e.g. HDD used under the ancient woodland;
  - Root impacts within the Veteran Tree Buffer Zone of veteran tree T<sub>142</sub> ash from the installation of a Temporary Construction Compound near the tree;
  - Minor incursion into the Veteran Tree Buffer Zone of To76 ash for an indicative off route access; and







- Root and/or canopy impacts to veteran tree T<sub>15</sub>0 ash should the working corridor for open cut trenching be located near the tree.
- Impacts to veteran and ancient trees must be avoided as a priority given these trees' 106. heightened sensitivity to any changes in their canopy or rooting environment and their high ecological, historical and cultural value. All the above impacts to ancient and veteran trees and ancient woodlands can be avoided through the mitigation measures detailed in the Outline Arboricultural Method Statement in section 6. Provided this is followed during construction, neutral residual impacts to ancient and veteran trees and ancient woodland is anticipated.







# 6 Outline Arboricultural Method Statement (OAMS)

#### 6.1 Introduction

# 6.1.1 Objectives of the Outline Arboricultural Method Statement (OAMS)

- 107. This OAMS seeks to provide options for mitigating and compensating for the potential impacts to trees, tree groups and woodlands (hereafter referred to as 'arboricultural features') during construction within the Onshore Development Area.
- Hedgerow impacts, mitigation and compensation is not considered in this OAMS. Mitigation and compensation for hedgerows has already been detailed in the **Outline Construction Code of Practice** [APP-234] and the **Outline Landscape Management Plan** [APP-236].
- This OAMS provides practical guidance, that if followed correctly will ensure existing arboricultural features highlighted for retention are safeguarded during construction, in particular those of high value such as veteran trees and those subject to a Tree Preservation Order.
- This final Arboricultural Method Statement must be made available and followed by all relevant contractors, sub-contractors and project consultants in the Onshore Development Area and read in conjunction with the **Outline Construction Code of Practice** [APP-234].

#### 6.1.2 Further Arboricultural Input Required

- The provision of a final Tree Protection Plan (TPP) for the Onshore Substation Zone will form part of the final Arboricultural Method Statement to detail the specification and locations of tree protection measures to safeguard retained trees during construction activities.
- The input of an Arboricultural Clerk of Works (ACoW) into proposed highway works will form part of the final Arboricultural Method Statement to ensure tree impacts are minimised in the detailed design.
- An ACoW will be required during construction within the Onshore Cable Corridor to check tree protection measures, provide advice on avoiding impacts to trees and supervise works close to trees where necessary.







# 6.1.3 Arboricultural Features Within the Onshore Development Area

- Tree surveys of the Onshore Development Area were carried out in 2024. These included detailed tree surveys at identified 'pinch points' whereby tree impacts were considered likely from a desktop assessment as well as a 'high-level' tree survey of the entire Onshore Development Area to map and record ancient and veteran trees.
- All tree surveys were carried out in accordance with British Standard 5837:2012 'Trees in Relation to Design, Demolition and Construction' (BS5837:2012) [Ref.1]. Stem positions were recorded using aerial mapping with a relative accuracy of 2-3m. The canopy spread, canopy height, Root Protection Areas and Veteran Tree Buffer Zones (latter where appropriate) were recorded for all arboricultural features. Full tree results can be found in Appendix 2 of this OAMS and are visually represented in the Tree Constraints Plans (Sheets 1-27) provided in Appendix 4 of the Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment (application ref: 8.30)
- The tree survey recorded 256 individual trees, 53 group of trees and three woodlands. These included nine veteran trees: To40 ash, To76 ash, To78 ash, To99 ash, T111 ash, T142 ash, T150 ash, T252 ash and T253 oak. One ancient woodland (W1) was also recorded at the Onshore Substation Zone.
- One Tree Preservation Order (TPO) was found to be adjacent to the Onshore Development Area. The TPO is located to the south-west of Beverley and south of the A1230 (National Grid reference: TA 0184 3794) as shown in Preliminary Tree Impact Plan 25 of 27 in Appendix 5.
- 118. The TPO applies to three recorded groups of trees (G23\*, G24\* and G25\*, \* indicates trees protected by a TPO). All trees lie outside the Onshore Development Area however their canopies and RPAs overlap with the Onshore Development Area.
- 119. No Conservation Area designations are within the Onshore Development Area or within 15m of the Onshore Development Area.

# 6.1.4 Known and Possible Arboricultural Impacts from the Projects

- 120. The Preliminary Arboricultural Assessment in section 5 of this report made an assessment of the potential arboricultural impacts of the Projects. Arboricultural impacts are likely to include:
  - Tree removal;
  - Tree pruning;
  - Dust/sediment impacts to adjacent woodlands;
  - Damage to canopies and stems; and







- Root impacts from:
  - Excavation within Root Protection Areas (RPAs);
  - Trenchless crossing techniques under trees; and
  - Soil compaction from vehicle or pedestrian movements within RPAs or piling of materials (such as spoil) within RPAs.
- The Arboricultural Survey Report and Preliminary Arboricultural Assessment included Preliminary Tree Impact Plans (Sheets 1-27) showing anticipated tree removals as well as canopy and root impacts. Some of these impacts were identified in the Preliminary Arboricultural Impact Assessment as 'known' impacts where fixed elements of the Projects will be sited near trees, for example the Converter Stations. Other impacts were highlighted as 'possible', largely along the Onshore Export Cable Corridor where the exact location open-cut trenching will be determined on site.
- The following construction activities pose a risk of causing one or more of the impacts listed above:
  - Onshore Substation Zone:
    - Construction of the Converter Stations;
    - Earthworks for the Converter Stations;
    - Installation of drainage connections from the Converter Stations to the drainage basin; and
    - o Construction of Permanent Access Roads.
  - Onshore Export Cable Corridor:
    - Open cut trenching for the Onshore Export Cables and establishment of a permanent easement;
    - Horizontal Directional Drilling (HDD);
    - Machinery movements within the Onshore Export Cable Corridor;
    - Storage of spoil within the Onshore Export Cable Corridor;
    - Construction of temporary construction accesses;
    - Construction of TCCs; and
    - Widening of roads/construction of passing places along Dunnington Lane, Eske Lane, Ings Road and the Unnamed Road north of the A1035 (West Road) opposite Catwick Heads.
- This OAMS will therefore address each of these elements of construction and provide precautionary working methods to follow to avoid and minimise impacts to existing arboricultural features.





#### 6.2 Outline Arboricultural Method Statement

#### 6.2.1 How to Use this Document

- The final Arboricultural Method Statement will be based on this Outline Arboricultural Method Statement (OAMS) and be presented to all personnel, visitors and subcontractors involved with Onshore Development Area construction activities.
- This OAMS identifies the key activities which have the potential to harm trees (see paragraph 127 above). Measures to avoid or mitigate the potential impacts to trees have been provided below and will be followed in collaboration with the assigned ACoW.
- 126. It is the responsibility of the Site Manager or nominated personnel with an arboriculture qualification to communicate the contents of this OAMS to all personnel, visitors and sub-contractors undertaking relevant activities.

### 6.2.2 Principles for Safeguarding Trees During Construction

Principle 1. Avoid tree removal wherever possible. Should tree removal be unavoidable, preferentially remove trees of lower quality and life expectancy over those of higher quality and life expectancy. In Appendix 1, trees with a BS5837:2012 Quality Category of U shall be preferentially removed followed by Category C, B and A trees in that order of priority. Veteran trees and trees protected by a TPO will not be removed







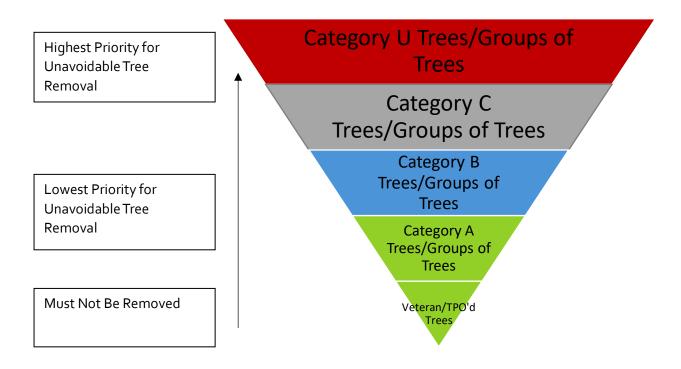


Plate 6-1 Principle 1

- Principle 2. Root Protection Areas (RPAs), and where applicable Veteran Tree Buffer Zones, of retained trees will be treated as Construction Exclusion Zones (CEZs) whereby no construction activities, machinery or materials will be present at any time. No oils or chemicals are to be stored within or near RPAs. The RPA represents the theoretical minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure is treated as a priority.
- Principle 3. Pruning the canopies of retained trees will be avoided wherever possible. Tall vehicles and machinery should be routed around tree canopies to avoid the need for pruning. Should tree pruning be unavoidable, preferentially prune trees of lower quality over trees of higher quality (as outlined in Plate 6-1) and ensure all works are carried out in accordance with British Standard 3998:2010 'Tree Work Recommendations' [Ref.2]by a qualified, insured, professional arborist. Veteran trees will not be pruned.







#### 6.2.3 Tree Removal

- 130. The following trees will be removed prior to construction works commencing:
  - Category A trees: To21 oak;
  - Category B trees: To2o oak, T246 sycamore, part of Go1 (approximately 55m) land G12;
  - Category C trees: Too5 sycamore, To96 goat willow, To97 goat willow, To98 horse chestnut, T188 ash, Go2 (partial removal), and
  - Category U trees: Go5
- All the above trees are shown for removal in the Preliminary Tree Impact Plans and are required for the construction of Temporary Construction Compounds and the Onshore Substation Zone including the Converter Stations and their associated permanent access road and earthworks.
- Additional tree removal (not listed above) may be required for the open-cut trenching sections of the Onshore Export Cable Corridor. Unavoidable tree removal must follow the order of priority detailed in Principle 1 above.
- All tree work will be undertaken by a suitably qualified, insured and experienced arboricultural contractor working in accordance with British Standard 3998: 2010 'Tree Work Recommendations'. No tree works will be undertaken by construction workers unless qualified and instructed to do so.

#### 6.2.4 Tree Pruning

- The following tree pruning is likely to be required prior to construction of the permenant access road at the Onshore Substation Zone as shown by Preliminary Tree Impact Plans Sheet 26 of 27:
  - Category A trees: To19 oak crown lift southern most part of canopy (overhanging road) from 2m vertical clearance height to 5.5m vertical clearance height to allow vehicles to pass underneath canopy. Smaller secondary and tertiary branches will be removed preferentially. Larger branches on the main stem must not be removed to avoid the creation of decay within the stem; and
  - Category B trees: Go1 prune back southern canopy spread by up to 5.5m (only where required) to facilitate earthworks beside road.
- Tree pruning may also be required along open-cut trenching sections of the Onshore Export Cable Corridor to make sufficient space for a working corridor. Tree pruning may also be required at vehicular access points, visibility splays and potentially for the widening/creation of passing places at Dunnington Lane, Eske Lane, Ings Road and the Unnamed Road north of the A1035 (West Road).
- 136. Tree pruning will be minimised wherever possible and target Category U trees first followed by Category C, B and A trees as per Principle 1 and **Plate 6-1**.





All tree work will be undertaken by a suitably qualified, insured and experienced Arboricultural contractorworking in accordance with British Standard 3998: 2010 Tree Work - Recommendations. No tree works will be undertaken by construction workers unless qualified to do so.

#### 6.2.5 Legal Restrictions on Tree Removal and Tree Pruning

All tree removal and tree pruning works must be carried out in accordance with ecological guidance regarding nesting birds and roosting bats as detailed in the Outline Ecological Management Plan [APP-235].

#### 6.2.5.1 Nesting Birds

All wild bird species (not game birds) are protected by The Wildlife and Countryside Act 1981 (as amended). It is offence to intentionally kill, injure or take any wild bird; intentionally take, damage or destroy the nest of any wild bird while it is in use or being built, intentionally take or destroy the egg of any wild bird or use traps or similar items to kill, injure or take wild birds.

#### 6.2.5.2 Bats

- 140. All British bat species are protected by Regulation 43 of The Conservation of Habitats and Species Regulations 2017 (as amended). These regulations make it an offence to:
  - Deliberately take, capture, disturb, injure or kill a bat;
  - Damage or destroy a breeding site or resting place of a bat; and
  - Sell or possess or transport any live or dead bat, or anything derived from a bat, for the purposes of sale.
- It is important to note that bat roosts are protected all times of the year, even when bats are absent. Where an activity is proposed that would result in an offence under the Regulations, a mitigation licence must be applied for and granted by Natural England to legally allow works to take place.

#### 6.2.5.3 Protected Trees

- Trees can be protected by a Tree Preservation Order (TPO) or by virtue of being situated within a Conservation Area designation. The locations and extents of TPOs and Conservation Areas can be viewed on East Riding of Yorkshire's Planning Constraints Map [Ref.3].
- The desk study carried out in September 2024 found no Conservation Area designations within the Onshore Development Area or within 15m of the Onshore Development Area. One TPO was found immediately adjacent to the Onshore Development Area, TPO 259 at the Former Broadgates Hospital, as shown in Preliminary Tree Impact Plan 25 of 27 in Appendix 5. Please note that new TPOs may be made and confirmed between September 2024 and construction concluding.





- Paragraph 39 of the **Draft Development Consent Order** [APP-027] provides 'deemed consent' to the Applicants to undertake works to trees subject to TPOs. As such, the submission of a tree works application to the local planning authority prior to works being undertaken to a TPO'd tree is not required.
- 145. Paragraph 39 states that "the undertaker may fell or lop, or cut back the roots of, any tree within or overhanging the Order limits that is subject to a tree preservation order if it reasonably believes it to be necessary to do so to prevent the tree from obstructing or interfering with the construction, maintenance or operation of the authorised project or any apparatus used in connection with the authorised project". It is therefore important that works to TPO'd trees only take place if the Applicants "reasonably believes it to be necessary to do so" for reasons of obstructing or interfering with construction, maintenance or operation of the Projects" apparatus.
- 146. Prior to undertaking works to TPO'd trees, advice from the ACoW will be sought to confirm whether the works are necessary and whether any alternative measures can be employed to avoid undertaking works to protected trees.

### 6.2.6 Onshore Substation Zone: Construction of Converter Stations

Prior to construction works commencing at the Onshore Substation Zone, retained arboricultural features must be protected with appropriate Temporary Tree Protection Fencing (TTPF). TTPF will create a Construction Exclusion Zone (CEZ) around retained trees to ensure that construction traffic, materials and activities do not take place within the CEZ near retained trees.

#### 6.2.6.1 Temporary Tree Protection Fencing (TTPF)

- 148. TTPF will be installed prior to any construction works commencing at the Onshore Substation Zone.
- TTPF will be offset from retained trees by the radius of the RPA at a minimum or by the radius of the Veteran Tree Buffer Zone (provided in Appendix 1) as relevant and must not be moved once installed. It is advised that a Tree Protection Plan is provided for the Onshore Substation Zone to specify the locations for TTPF and any other tree protection measures.
- Tree protection fencing will by default consist of a vertical scaffold framework made of posts, well braced to resist impacts. The framework must be driven into the ground, taking care to avoid any large structural roots (>25mm in diameter) and underground services. Onto this framework, Heras fencing will be securely fixed with anti-tamper couplers between fence panels. An alternative acceptable specification that avoids driving posts into the ground would be bracing Heras fencing with bracing poles and ground pins or bracing poles with block trays as shown in **Plate 6-2** below.







151. Signage will be attached regularly to Heras fencing panels that reads '*Tree Protection Zone –Keep Out'*.

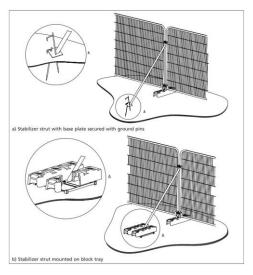


Plate 6-2 Temporary Tree Protection Fencing Specification as per BS5837: 2012

- Once fencing has been installed and before construction activities begin, a site check by the ACoW will take place to check the locations and suitability of the TTPF.
- During the check of the tree protection, a 'toolbox talk' with the Site Manager will also take place to ensure that a copy of this OAMS has been received and to discuss the arboricultural methods specified.
- Once installed, TTPF will not be moved or altered in anyway without prior consultation and sign off from the ACoW. If fencing does need to be moved back to create construction space, appropriate ground protection must be used to cover the exposed RPA during works until such time as the TTPF can be reinstated in its original position.
- 155. It is the responsibility of all persons working on the Site to ensure that the TTPF remains intact and in the correct locations throughout construction. It is also the responsibility of all persons working on the site to respect the CEZ created by the TTPF. In the event that any fence panels are damaged, this must be rectified immediately to restore the CEZ.
- 156. TTPF will only be removed once all construction and landscaping work is complete.

#### 6.2.6.2 Ground Protection

Where TTPF needs to be set back closer to tree stems (for example where additional construction space is needed) so that the entire RPA or Veteran Tree Buffer Zone is not protected, ground protection must be installed to protect the remaining RPA/Veteran Tree Buffer Zone. It is advised that a Tree Protection Plan is provided for the Onshore Substation Zone to specify the locations for ground protection installation.







- 158. Ground protection must be installed prior to construction works commencing in the relevant area and must be signed off by the ACoW prior to works commencing.
- 159. Ground protection must be suitable for the weight of the traffic using the area to ensure that underlying soils are not compacted. Ground protection specifications will meet the recommendations set out in paragraph 6.2.3.3 of British Standard 5837:2012:

"for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane;

for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane;

for wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected."

- 160. For construction traffic exceeding 2 tonnes, appropriate ground protection will constitute a 150mm woodchip or sharp sand layer topped with heavy-duty ground protection mats (multiple providers are available for rent or purchase) that are suitable for the weight of the heaviest vehicle requiring access to the area.
- In all cases the objective must be to avoid soil compaction within RPAs. A single pass of a heavy vehicle, especially in wet ground conditions, can cause compaction.

#### 6.2.7 Onshore Substation Zone: Construction of Permanent Access Roads

- Tree removal to facilitate the permanent access road to the Converter Stations has already been included in the tree removals listed in section 1.1.1 of this OAMS.
- Tree pruning will likely be required for To19 oak and Go1 and potentially Wo2. All tree pruning must follow the precautionary working methods described in sections 6.2.4 and 6.2.5 above.

#### 6.2.8 Onshore Export Cable Corridor: Open Cut Trenching

- Open cut trenching sections may require tree removal and tree pruning. Working corridors must be micro-sited so that tree removal and pruning preferentially targets Category U trees followed by Category C, B and A trees as per Principle 1.
- Following any necessary tree removal/pruning and prior to works commencing near retained trees, TTPF must be installed around retained trees near the working corridor to create a CEZ. TTPF must be installed at the edge of the RPA radius (as shown in Appendix 1) and ground protection used where necessary.







- The distance between excavation and the stems of retained trees (particularly Category A and B trees) must be maximised to ensure the structural roots of such trees are not damaged or severed. Hand digging and root pruning under ACoW supervision as per paragraphs 178 and 179 below will be required where excavation within the RPAs of retained Category A and B trees is unavoidable.
- Prior to excavation near trees, TTPF will be set back to the edge of the working area to create a CEZ around the trees. TTPF may consist of post and rope barriers where large stretches of TTPF is required. Ground protection will then be installed in the remaining unprotected RPA with a gap for the trench. The trench will then be hand dug using hand tools and/or airspade under the supervision of the ACoW. No machinery is permitted for use within the RPA.
- During trench excavation, any roots larger than 25 millimetres (mm) in diameter will be assessed by the ACoW and retained in situ wherever possible. While exposed, such roots will be wrapped in damp hessian which can then be removed once the trench is refilled. Roots smaller than 25mm in diameter will be cut back cleanly to the side of the trench using secateurs. The trench will be backfilled with the excavated spoil or other inert materials such as sharp sand (not builder's sand).
- Once the Onshore Export Cables are laid and works have ceased in the area, TPPF and ground protection may be removed.

#### 6.2.9 Onshore Export Cable Corridor: Trenchless Crossings

- 170. Prior to trenchless crossing e.g. HDD machinery being situated, adjacent trees will be protected with TTPF to create a CEZ around the trees for the duration of works in the area.
- The entry and exit points for trenchless crossing e.g. HDD must be located outside the RPAs of retained trees.
- Trenchless crossing e.g. HDD depths must exceed 1m when passing underneath retained trees in order to avoid the majority of tree roots which exist within the upper 600mm of soil. In the instance of trees being within an area of ancient woodland, the Applicants are committed to using trenchless crossing techniques, such as HDD, at depths greater than 5 meters, as recommended by the Woodland Trust. If any constraints are identified during detailed geotechnical investigations, shallower depths will only be attempted if clear evidence is provided to demonstrate that this would not result in adverse impacts on roots, soils, or the rhizosphere along or above the proposed route.
- Once all trenchless crossing e.g. HDD machinery is removed from an area, only then can TPPF be removed.





### 6.2.10 Onshore Export Cable Corridor: Machinery Movements

- 174. Prior to construction machinery/vehicles entering an area with retained arboricultural features, TPPF will be installed.
- 175. In particular, T150 veteran ash must be protected with TPPF prior to works commencing in the vicinity of this tree.
- Movements and routes for tall machinery will avoid wherever possible the canopies of retained trees. Where tall machinery must work in close proximity to retained trees, tree pruning in accordance with sections 6.2.4 and 6.2.5 and Principle 1 must be undertaken prior to such machinery attempting to move past the affected trees. A bankman will be used where necessary to guide the travel of cranes/working arms of machinery near trees in order to minimise the risk of collisions with stems and branches.

#### 6.2.11 Onshore Export Cable Corridor: Spoil Storage

177. All spoil will be stored outside of the RPAs of retained trees.

### 6.2.12 Onshore Export Cable Corridor: Temporary Construction Accesses

- 178. Tree removal to facilitate the Temporary Construction Accesses along the Onshore Development Area has already been included in the tree removals listed in paragraph 135 of this OAMS.
- Tree pruning to the retained trees lining Temporary Construction Accesses may be required. All tree pruning must follow the precautionary working methods described in sections 6.2.4 and 6.2.5 above.
- The Preliminary Arboricultural Impact Assessment found that a Temporary Construction Access is proposed within the Veteran Tree Buffer Zone of To76, a veteran ash tree. To76's Veteran Tree Buffer Zone has a radius of 13.5m. To76 must have TPPF installed at the edge of the Veteran Tree Buffer Zone and the Temporary Construction Access will be micro-sited outside of the CEZ to avoid soil compaction or root impacts to To76.
- Similarly, a Temporary Construction Access is proposed adjacent to G<sub>3</sub>0 and G<sub>3</sub>1, veteran ash tree To<sub>9</sub>9 and trees T<sub>13</sub>6-T<sub>14</sub>1. These trees must be protected with TPPF prior to construction of the accesses and the accesses will be micro-sited outside of RPAs and Veteran Tree Buffer Zones.
- All TPPF must be maintained in situ for the duration of use of the Temporary Construction Access and can be removed once the access is removed.







# 6.2.13 Onshore Export Cable Corridor: Temporary Construction Compounds (TCC)

- The Preliminary Arboricultural Impact Assessment found that TCCs are proposed within the Veteran Tree Buffer Zone of veteran tree T142 ash and RPAs of trees: T143 ash, T053 oak and T055 oak.
- TCCs will be micro-sited outside of the Veteran Tree Buffer Zone and RPAs of the above trees. Prior to construction of the TCC, these trees will be protected with TPPF which will remain in situ for the duration of the use of the TCC and only removed once the TCC is removed.

#### 6.2.14 Onshore Export Cable Corridor: Highway Works

- The Preliminary Arboricultural Impact Assessment found that trees are present along the roads proposed for highway works which will involve either widening or the construction of passing places for construction traffic. These roads include:

  Dunnington Lane, Eske Lane, Ings Road and the Unnamed Road north of the A1035 (West Road) opposite Catwick Heads.
- 186. Tree removal will be avoided wherever possible and existing gaps in trees along the sides of the roads will be used for widening or the creation of passing places. Tree removal where necessary will follow Principle 1. The ACoW will input into the detailed design of highways works to ensure impacts to existing trees are minimised. Impacts to trees along the highway, particularly the loss of structural roots during excavation, may have implications for tree and highway safety.

#### 6.2.15 Compensatory Tree Planting

- The **Outline Landscape Management Plan** [APP-236] contains provisions for compensatory tree planting to replace those trees felled to facilitate the Projects. Trees will not be planted on the permanent easement for the Onshore Export Cable Corridor. Locations and species specifications for tree planting will be confirmed in the final Landscape Management Plan.
- 188. No new tree planting will occur within the Veteran Tree Buffer Zones of identified veteran trees. Veteran trees are particularly sensitive to changes in their environment. The planting of new trees can result in competition for water and nutrients and decreases light levels that may cause the early decline and premature loss of veteran trees.







All tree planting will be in accordance with British Standard 8545:2014 'Trees: From Nursery to Independence in the Landscape – Recommendations' [Ref.5]. Aftercare for a minimum of five years after tree planting which includes applications of mulch or weeding, watering, stem support and grazing protection must all be incorporated into the final Landscape Management Plan. This will give new trees the best chance of successfully establishing and achieving the intended compensation for lost trees.

#### 6.2.16 Arboricultural Monitoring and Supervision

- 190. A suitably qualified project Arboriculturist will be nominated as the ACoW and instructed by the Applicants at the start of the construction phase to oversee the implementation of this OAMS during all relevant construction processes.
- 191. It will be the responsibility of the Site Manager to consult the ACoW at the following stages of construction:
  - Following installation of TPPF and ground protection;
  - Where advice is needed on tree removal/pruning/root pruning or tree health and safety;
  - Prior to hand-digging commencing within the RPAs of retained trees; and
  - Where any further advice is required in relation to trees, groups of trees or woodlands.
- After each site visit, an Arboricultural Monitoring Report will be produced by the ACoW with photographic evidence and observations/actions required. These monitoring reports will be provided to the Applicants within one week of the site visit.
- Should any unplanned events or damage occur to trees, these will be highlighted in the monitoring report and a resolution arrived at in collaboration with the ACoW, Site Manager and the Applicants.







#### Appendix 1. Tree Survey Schedule

					Ca	пору	Spread	l (m)				Direction and			Estimated	BS				Veteran
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	E	S	w	Life Stage	General Observations	Ground Clearance (m)	Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Remaining Contribution (years)	5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Tree Buffer Radius (m)
G01	Hawthorn, Ash, Oak, Elder, Sycamore, Goat Willow, Blackthorn, Silver Birch	Crateagus monogyna, Fraxinus excelsior, Quercus robur, Sambucus nigra, Acer pseudoplatanus, Salix caprea, Prunus spinosa, Betula pendula	12.5	600	7	7	7	7	Early mature	Regularly spaced Oak, frequent Sycamore. Hawthorn and blackthorn occasional and all other species listed rarely present			Good	Good	40+	В3	163	7.2	No	
G02	Hazel, Oak, Hawthorn, Sycamore	Corylus avellana, Quercus robur, Crataegus monogyna, Acer pseudoplatanus	6	~ 320	3	3	3	3	Semi mature	Group comprised of young and semi-mature Oak with Hazel	0		Fair	Good	40+	C <sub>3</sub>	46	3.8	No	
Go3	Ash, Sycamore	Fraxinus excelsior, Acer pseudoplatanus	8	200	4	4	4	4	Young	6 ash, 1 sycamore all muti stem			Fair	Good	40+	C2	18	2.4	No	
Go4	Sycamore, Blackthorn	Acer pseudoplatanus, Prunus spinosa	7.5	150	2.5	2.5	2.5	2.5	Semi mature	Srcubby group of blackthorn with self-seeded sycamore	0		Good	Good	40+	C <sub>3</sub>	10	1.8	No	
Go5	Sycamore	Acer pseudoplatanus	12	250	3	3	3	3	Semi mature	4 dead trees and 1 live sycamore	1.5	E1.5	Fair	Fair	10-20	U	28	3.0	No	
Go6	Elm	Ulmus sp(p)	5	100	2	2	2	2	Young				Fair	Good	10-20	C <sub>2</sub>	5	1.2	No	
G07	Larch, Oak, Hawthorn, Blackthorn, Ash, Wild cherry, Scots pine	Larix decidua, Quercus robur, Crataegus monogyna, Prunus spinosa, Fraxinus excelsior, Prunus avium, Pinus sylvestris	17.5	~ 400				3.5	Semi mature	Belt of trees along road embankment, semi-early mature			Good	Good	40+	B2	72	4.8	No	
Go8	Hawthorn, Blackthorn, Holly	Crateagus monogyna, Prunus spinosa, Ilex aquifolium	8.5	~ 350	2	4	4	4	Mature	Scattered trees along boundary	0		Good	Good	40+	В3	55	4.2	No	
Gog	Horse Chestnut,	Aesculus hippocastanum, Fraxinus excelsior,	11.5	~ 530	2.5	3.5	5	3	Semi mature				Good	Good	40+	В3	127	6.4	No	





																		LCODOCT	Normber 005	54039/3-01
			Tree	Stem	Ca	nopy !	Spread	l (m)			Ground	Direction and			Estimated	BS	Root	Radius	Veteran	Veteran Tree
Ref No.	Common Name	Scientific Name	Height (m)	Diameter (mm)	N	E	S	w	Life Stage	General Observations	Clearance (m)	Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Remaining Contribution (years)	5837:2012 Quality Category	Protection Area (m2)	of RPA (m)	or Ancient?	Buffer Radius (m)
	Ash, Hawthorn	Crataegus monogyna																		
G10	Blackthorn, Elder, Hawthorn, Hazel	Prunus spinosa, Sambucus nigra, Crataegus monogyna, Corylus avellana	8	300		3			Early mature				Good	Good	40+	В3	41	3.6	No	
G11	Hawthorn, Elder	Crataegus monogyna, Sambucus nigra	7.5	250	3	3	2	3.5	Mature				Good	Good	40+	B <sub>3</sub>	28	3.0	No	
G12	Oak, Sycamore	Quercus robur, Acer pseudoplatanus	13	480	6.5	6.5	6.5	6.5	Semi mature	On top of bank of single carriageway, 5 sycamore and 3 oak	0.5		Good	Good	40+	B2	104	5.8	No	
G13	Wild Cherry, Hawthorn, Scots Pine, Ash	Prunus avium, Crataegus monogyna, Pinus sylvestris, Fraxinus excelsior	5.5	148	3	3	3	3	Young				Good	Good	40+	C <sub>3</sub>	10	1.8	No	
G14	Leylandii	x Cuprocyparis leylandii	6	240	4	4	4	4	Semi mature	Mix of golden and normal leylandii			Good	Good	40+	C <sub>2</sub>	26	2.9	No	
G15	Horse Chesnut, Ash, Hawthorn, Hazel, Goat Willow, Wild Cherry, Cherry Plum, Blackthorn, Silver Birch, Holly, Elder	Aesculus hippocastanum, Fraxinus excelsior, Crataegus monogyna, Corylus avellana, Salix caprea, Prunus avium, Prunus cerasifera, Prunus spinosa, Betula pendula, Ilex aquifolium, Sambucus nigra	9	340	4	4	4	4	Semi mature	Scattered trees and brambles			Good	Good	40+	В3	52	4.1	No	
G16	Ash	Fraxinus excelsior	8.5	230	4.5	4.5	3.5	3	Semi mature		1		Fair	Fair	10-20	C2	24	2.8	No	
G17	Silver Birch, Willow, Hawthorn, Beech, Oak	Betula pendula, Salix sp, Crataegus monogyna, Fagus sylvatica, Quercus robur	5.5	200	3.5	3.5	3.5	3.5	Young	Newly planted trees			Good	Good	40+	C3	18	2.4	No	





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					Ca	nopy !	Spread	d (m)				Direction			e de la compa	D.C.				Veteran
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	E	S	w	Life Stage	General Observations	Ground Clearance (m)	and Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Estimated Remaining Contribution (years)	BS 5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Tree Buffer Radius (m)
G18	Hawthorn, Ash, Sycamore, Leylandii, Lawsons Cypress, Hazel	Crataegus monogyna, Fraxinus excelsior, Acer psuedoplatanus, x Cuprocyparis leylandii, Cupressus x leylandii	17.5	~ 450	4	4.5	6	5	Semi mature	Scattered mixed trees, larger ash and sycamore	0		Good	Good	40+	B2	92	5.4	No	
G19	Field Maple, Field Elm, Blackthorn	Acer campestre, Ulmus procera, Prunus spinosa	13.5	360	~ 6	~ 6	~ 6	~ 6	Mature		1		Good	Good	40+	В3	59	4.3	No	
G20	Sycamore	Acer pseudoplatanus	17.5	658	6	7.5	7.5	8.5	Early mature	7 Sycamore	1		Fair	Good	40+	B2	196	7.9	No	
G21	Silver Birch, Field Maple, Hawthorn, Elder	Betula pendula, Acer campestre, Crataegus monogyna, Sambucus nigra	9	~ 450	4.5				Mature	Uncut hedgerow	0		Good	Good	40+	В3	92	5.4	No	
G22	Elder	Sambucus nigra	5	240	3	3	3	3	Mature		0.5		Fair	Good	20-40	C <sub>2</sub>	26	2.9	No	
G23*	Sycamore, Beech	Acer pseudoplatanus, Fagus sylvatica	15.5	~ 900		8.5			Early mature	8 Sycamore, 1 Beech, no stem access all trees in private garden	6.5		N/A	Good	40+	B <sub>2</sub>	366	10.8	No	
G24*	Hawthorn	Crataegus monogyna	9	242		4.5			Mature		1		Good	Good	40+	В3	26	2.9	No	
G25*	Hawthorn, Oak, Sycamore, Leylandii, Ash, Black pine, Lime	Crataegus monogyna, Quercus robur, Acer pseudoplatanus, x cuprocyparis leylandii, Fraxinus excelsior, Pinus nigra, Tilia sp.	25	~ 700		7			Early mature	No access to stems in private gardens	2		Good	Good	40+	A2	222	8.4	No	
G26	Sycamore, Blackthorn, Hawthorn	Acer psueoplatanus, Prunus spinosa, Crataegus monogyna	7	671			7		Early mature				Good	Good	40+	В3	204	8.1	No	
G27	Hazel, Elder, Blackthorn, Hawthorn	Corylus avellana, Sambucus nigra, Prunus spinosa, Crataegus monogyna	~ 6	300	2.5		3.5		Semi mature	A double hedgerow			Good	Good	40+	В3	41	3.6	No	







					Ca	nopy !	Spread	l (m)				Direction and			Estimated	BS			Normber 003	Veteran
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	E	S	w	Life Stage	General Observations	Ground Clearance (m)	Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Remaining Contribution (years)	5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Tree Buffer Radius (m)
G28	Blackthorn, Elder	Prunus spinosa, Sambucus nigra	4.5	75	2	2	2	2	Young	Patchy shrubs around hawthorn	0		Good	Good	40+	C2	3	0.9	No	
G29	Hawthorn, Blackthorn	Crataegus monogyna, Prunus spinosa	~ 5	150	3	3	3	3	Semi mature	Gappy uncut hedge			Good	Good	40+	В3	10	1.8	No	
G30	Ash, Hawthorn	Fraxinus excelsior, Crataegus monogyna	13.5	~ 510	~ 6	7.5	7.5	5	Semi mature	Owl box installed on eastern Ash			Good	Good	40+	B2	118	6.1	No	
G31	Black Pine, Ash, Hawthorn, Beech, Sycamore	Pinus nigra, Fraxinus excelsior, Crataegus monogyna, Fagus sylvatica, Acer pseudoplatanus	20	890	~ 9	~ 9	9	~ 9	Early mature	Bird boxes scattered amongst trees, lots of cracked out limbs and decay in Ash	2.5		Fair	Fair	20-40	В3	358	10.7	No	
G32	Ash, Hawthorn, Horse Chesnut, Elm	Fraxinus excelsior, Crataegus monogyna, Aesculus hippocastanum, Ulmus sp.	7	200	2	2	2	~ 2	Young				Good	Good	40+	C2	18	2.4	No	
G <sub>33</sub>	Horse Chestnut, Hawthorn, Elder, Ash, Elm	Aesculus hippocastanum, Crataegus monogyna, Sambucus nigra, Fraxinus excelsior, Ulmus sp.	8.5	300	4	4	4	4	Semi mature		0		Good	Good	40+	В3	41	3.6	No	
G <sub>34</sub>	Wild Cherry	Prunus avium	5	75	1	1	1	1	Young		0		Good	Good	20-40	C <sub>2</sub>	3	0.9	No	
G <sub>35</sub>	Hawthorn	Crataegus monogyna	7	259	4	2	4	2	Mature	Scattered hawthorn outgrown hedge	0		Good	Good	40+	C2	30	3.1	No	
G36	Hawthorn	Crataegus monogyna	7	~ 335	3.5	2	3.5	2	Early mature	Hawthorn growing between Ash trees	0		Good	Good	40+	C2	51	4.0	No	
G <sub>37</sub>	Elm, Field maple, Ash, Hawthorn	Ulmus sp(p), Acer campestre, Fraxinus excelsior, Crataegus monogyna	9	250	4	4	4	4	Semi mature	Most trees are dead, remaining trees in poor condition	3		Poor	Poor	<10	U	28	3.0	No	
G <sub>3</sub> 8	Ash, Oak, Hawthorn	Fraxinus excelsior, Quercus robur,	13	280	4.5	4.5	4.5	4.5	Semi mature	Small group of Ash, 6 Ash, 1 Oak	0		Good	Fair	20-40	C2	35	3.4	No	





																		LCODOCT	lumber oog	4039/3-01
Ref	Common	Scientific Name	Tree Height	Stem Diameter	Ca	nopy !	Spread	(m)	Life	General	Ground Clearance	Direction and Height	Structural	Physiological	Estimated Remaining	BS 5837:2012	Root Protection	Radius of RPA	Veteran or	Veteran Tree Buffer
No.	Name	Scientific Name	(m)	(mm)	N	E	S	w	Stage	Observations	(m)	(m) of Lowest Branch	Condition	Condition	Contribution (years)	Quality Category	Area (m2)	(m)	Ancient?	Radius (m)
		Crataegus monogyna								and Hawthorn hedge										
G <sub>39</sub>	Hawthorn	Crataegus monogyna	6.5	282	4	4	4	4	Early mature	Four hawthorn, 1 dead	0.5		Good	Good	40+	B2	36	3.4	No	
G40	Hawthorn, Sycamore, Blackthorn	Crataegus monogyna, Acer pseudoplatanus, Prunus spinosa, Sambucus nigra	8	300	4	4	4	4	Early mature	Hedges and trees along road	0		Good	Good	20-40	B2	41	3.6	No	
G41	Beech, Blackthorn	Fagus sylvatica, Prunus spinosa	10	350	6	6	6	6	Semi mature	Trees beyond hedge	0		Good	Good	40+	B2	55	4.2	No	
G42	Hawthorn Elder	Crataegus monogyna, Sambucus nigra	6	300	4	4	4	4	Early mature	Hedge on west side of the road	0		Good	Good	40+	B2	41	3.6	No	
G43	Sycamore, Elm, Hawthorn	Acer pseudoplatanus, Ulmus sp., Crataegus monogyna	15.5	600	8	8	8	8	Early mature	Mostly Sycamore with few Elm, ivy covering stems of most trees			Good	Good	40+	B2	163	7.2	No	
G44	Hawthorn, Blackthorn	Crataegus monogyna, Prunus spinosa	6.5	300	3	3	3	3	Early mature	Hedge	0		Good	Good	40+	B2	41	3.6	No	
G45	Hawthorn, Blackthorn	Crataegus monogyna, Prunus spinosa	6.5	395	3	3	3	3	Mature	Hawthorn hedge dividing fields			Good	Good	40+	B2	71	4.7	No	
<b>G</b> 46	Hawthorn, Blackthorn, Elder, Field Maple, Crab Apple	Crataegus monogyna, Prunus spinosa, Sambucus nigra, Acer campestre, Malus sylvestris	8	260	4	4	4	4	Mature	Mature uncut hedge mixed with trees	0		Good	Good	40+	B2	31	3.1	No	
G47	Hawthorn	Crataegus monogyna	6	200	2	2	2	2	Mature		0		Good	Good	40+	C2	18	2.4	No	
G48	Hawthorn	Crataegus monogyna	5.5	250	3	3	3	3	Mature		0		Fair	Good	40+	C <sub>2</sub>	28	3.0	No	
<b>G</b> 49	Ash, Hawthorn, Blackthorn	Fraxinus excelsior , Crataegus monogyna, Prunus spinosa	10.5	300	5	5	5	5	Semi mature	12 Ash growing inside hedge	0		Fair	Fair	20-40	C2	41	3.6	No	





					Ca	пору	Spread	(m)				Direction and			Estimated	BS				Veteran
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	E	S	w	Life Stage	General Observations	Ground Clearance (m)	Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Remaining Contribution (years)	5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Tree Buffer Radius (m)
G50	Ash, Hawthorn, Blackthorn	Fraxinus excelsior , Crataegus monogyna, Prunus spinosa	10.5	300	5	5	5	5	Semi mature	8 Ash growing inside hedge			Fair	Fair	20-40	C2	41	3.6	No	
G <sub>5</sub> 1	Hawthorn, Blackthorn	Crataegus monogyna, Prunus spinosa	6.5	200	3	1.5	3	1.5	Semi mature	Hedge	0		Good	Good	40+	C2	18	2.4	No	
G52	Hawthorn, Blackthorn	Crataegus monogyna, Prunus spinosa	6.5	180	3	3	3	3	Early mature		0		Good	Good	40+	C2	15	2.2	No	
G <sub>53</sub>	Sycamore, Oak, Cherry, Ash	Prunus avium, Fraxinus excelsior	12.5	280	4	4	4	4	Semi mature		0		Good	Good	40+	B2	35	3.4	No	
T001	Oak	Quercus robur	11	~ 450	5.5	5.5	5.5	5.5	Semi mature		2.5	E2	Good	Good	40+	B2	92	5.4	No	
T002	Oak	Quercus robur	10	~ 400	5.7	5	5.5	5	Semi mature		2.5	E1.5	Good	Good	40+	B2	72	4.8	No	
T003	Sycamore	Acer pseudoplatanus	15	790	~ 6.5	6	6.5	6.5	Early mature	Tight fork with cup union, minor ivy	4	SW4	Fair	Good	40+	В2	282	9.5	No	
T004	Sycamore	Acer pseudoplatanus	8	~ 484	4	4	3	3	Young	Tight union at base	1	So.5	Fair	Good	40+	C2	106	5.8	No	
T005	Sycamore	Acer pseudoplatanus	6.5	~ 291	1.5	1.5	1.5	1.5	Young	Three stems at base	0		Fair	Good	40+	C2	38	3.5	No	
Too6	Ash	Fraxinus excelsior	11	572	7	7.5	7	7	Early mature	Multi stem at base	3	NE <sub>2</sub>	Fair	Fair	10-20	C2	148	6.9	No	
T007	Sycamore	Acer pseudoplatanus	13	546	6	6	5	2	Early mature	Two trees, cankers and dysfunctional bark, multi stem at base	4	N <sub>3</sub> . <sub>5</sub>	Fair	Poor	<10	U	135	6.6	No	
Too8	Sycamore	Acer pseudoplatanus	7	155	2	2	2	2	Young		4	N1.5	Fair	Good	40+	C2	11	1.9	No	
T009	Ash	Fraxinus excelsior	6.5	250	5	~ 5	~ 5	~ 5	Young	Multi stem at base	1.5	E2	Fair	Good	20-40	C2	28	3.0	No	
To10	Sycamore	Acer pseudoplatanus	6	167	3	3	3	3	Young	Multi stem at base			Fair	Good	40+	C2	13	2.0	No	





					Ca	nopy !	Spread	(m)				Direction						LCODOCT	iumber oog	Veteran
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	E	S	w	Life Stage	General Observations	Ground Clearance (m)	and Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Estimated Remaining Contribution (years)	BS 5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Tree Buffer Radius (m)
T011	Sycamore	Acer pseudoplatanus	8	244	4.5	4.5	4.5	2	Young	Multi stem at base	1		Fair	Good	20-40	C2	27	2.9	No	
T012	Common oak and hybrid turkey oak	Quercus robur and Quercus cerris	12	1100	7.5	7.6	9	7.5	Mature	On north side of ditch	1	W2	Good	Good	40+	A2	547	13.2	No	
T013	Sycamore	Acer pseudoplatanus	6.5	167	2	2	2	2	Young	Multi stem at base	0		Fair	Good	40+	C2	13	2.0	No	
T014	Sycamore	Acer pseudoplatanus	4	150	2	2	2	2	Young	Multi stem at base	0		Fair	Good	40+	C2	10	1.8	No	
To15	Ash	Fraxinus excelsior	14	1000	9.5	8	8	8.5	Early mature	Significant basal hollowing, original stem snapped out, regrown crown	2	W1.5	Poor	Fair	10-20	C2	452	12.0	No	
To16	Sycamore	Acer pseudoplatanus	14	~ 550	5.5	5.5	5.5	1	Early mature		0	Eo.5	Good	Good	40+	B2	137	6.6	No	
T017	Sycamore	Acer pseudoplatanus	10	~ 500	4	1	5	5.5	Early mature	90% dead, lots of standing deadwood	1	W2.5	Poor	Poor	<10	U	113	6.0	No	
To18	Sycamore	Acer pseudoplatanus	13	600	5.5	6	4.5	~ 4·5	Early mature	Multi stem at base, some tight forks	1.5		Fair	Good	40+	B2	163	7.2	No	
To19	Oak	Quercus robur	11	720	5	6	7.5	7	Early mature	Dead branches in crown, cavities, high wildlife value	2	S4	Fair	Good	40+	A3	235	8.6	No	
T020	Oak	Quercus robur	10.5	~ 500	9	8	7.5	7.5	Early mature	Dead former leader branch retained in crown	3	NE <sub>3</sub>	Good	Good	40+	В2	113	6.0	No	
T021	Oak	Quercus robur	15	950	10	10	10	11	Early mature	Raptor bird box installed on tree	5	N <sub>5</sub>	Good	Good	40+	A2	408	11.4	No	
T022	Ash	Fraxinus excelsior	6.5	282	3	2	2	1	Early mature	Flailed at 1m height and then regrown			Poor	Fair	20-40	C2	36	3.4	No	
To23	Oak	Quercus robur	8	750	7	6	6	5.5	Early mature	Major ivy cladding, stag headed, some deadwood in crown	3	N2	N/A	Good	40+	В3	254	9.0	No	
T024	Oak	Quercus robur	13.5	1110	9	9	10	9	Mature	Moderate ivy coverage, narrow	4	S <sub>4</sub>	Fair	Fair	40+	A2	557	13.3	No	







																		ECODOCI	Number oog	4039/3-01
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	Ca N	nopy:	Spread S	(m) W	Life Stage	General Observations	Ground Clearance (m)	Direction and Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Estimated Remaining Contribution (years)	BS 5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Veteran Tree Buffer Radius (m)
										cavity at base on east side, standing deadwood										
T025	Oak	Quercus robur	7	~ 200	2.5	2.5	2.5	2.5	Young		3	E2.5	Good	Good	40+	C <sub>2</sub>	18	2.4	No	
To26	Oak	Quercus robur	9.5	900	7.5	8	7.5	6	Early mature	Hazard beam features, large dead branches, stag headed, moderate ivy coverage	4	<b>S</b> 4	Good	Fair	40+	В3	366	10.8	No	
T027	Field maple	Acer campestre	9.5	855	6.5	6	6.5	6	Mature	Multi stem at base, moderate ivy coverage	4	N1	Fair	Good	40+	В3	331	10.3	No	
T028	Field maple	Acer campestre	6.5	264	2.5	2	2.5	2	Early mature		4		Fair	Good	40+	C2	32	3.2	No	
T029	Field maple	Acer campestre	6.5	264	2.5	2	2.5	2	Early mature	Multi stem at base	4		Fair	Good	40+	C2	32	3.2	No	
To30	Field maple	Acer campestre	6.5	244	2.5	2	2.5	2	Early mature		4		Fair	Good	40+	C2	27	2.9	No	
To <sub>3</sub> 1	Ash	Fraxinus excelsior	7	282	3	2.5	3	2.5	Semi mature		4		Fair	Good	20-40	C2	36	3.4	No	
T032	Ash	Fraxinus excelsior	7	264	2.5	2	2.5	2	Semi mature		4		Fair	Good	20-40	C2	32	3.2	No	
To33	Oak	Quercus robur	6.5	180	2	1.5	2	1.5	Young		4	N <sub>3</sub>	Fair	Good	40+	C <sub>2</sub>	15	2.2	No	
To <sub>34</sub>	Oak	Quercus robur	14.5	1010	6	6	11.5	11	Mature	Large cracked off scaffold branch to north, attached dead branches to south, wildlife value, few cankers at base on east side	3	S4	Fair	Good	40+	В3	461	12.1	No	
To35	Oak	Quercus robur	17	1160	10	15	9.5	7	Mature	Cavity at base on west side, deadwood in crown	3	SE <sub>5</sub>	Fair	Good	40+	A2	609	13.9	No	
To <sub>3</sub> 6	Oak	Quercus robur	13	750	7	9	6.5	7	Early mature		4	NE <sub>3</sub>	Good	Good	40+	A2	254	9.0	No	





																		LCODOCT	number 005	4039/3-01
					Ca	nopy S	pread	(m)				Direction and			Estimated	BS				Veteran
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	E	S	w	Life Stage	General Observations	Ground Clearance (m)	Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Remaining Contribution (years)	5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Tree Buffer Radius (m)
To <sub>37</sub>	Oak	Quercus robur	16.5	1200	10	9	10	8.5	Mature	Deadwood in crown, cavities in some branches, crown a little thin, flaky bark on north side of stem, habitat value	1.5	E3	Good	Fair	40+	А3	651	14.4	No	
To <sub>3</sub> 8	Oak	Quercus robur	14	1400	11	10	9	9	Mature	Lightening strike feature on main scaffold, bat potential	2	SE <sub>3</sub>	Fair	Good	40+	A3	707	15.0	No	
To39	Oak	Quercus robur	14.5	900	7	10	10	11.5	Early mature	No access to stem, stem behind blckthorn	4	E2.5		Good	40+	A2	366	10.8	No	
T040	Ash	Fraxinus excelsior	13	950	7.5	9	3.5	0.5	Mature	Hollow stem, on woodland edge, good bud coverage, cavities in scaffold branches, some minor standing and fallen deadwood	2.5	N2	Poor	Fair	20-40	А3	408	11.4	Yes	14.3
T041	Oak	Quercus robur	11.5	730	6	8	7.5	6.5	Early mature	Two big cavities on northside of stem	1	E2	Fair	Good	40+	В3	241	8.8	No	
T042	Oak	Quercus robur	16	780	5.5	6	7.5	9	Early mature	Previous pruning and crown lifting on east side	0.5	N <sub>3</sub>	Good	Good	40+	В2	275	9.4	No	
To43	Ash	Fraxinus excelsior	4.5	~ 75	1.5	1.5	1.5	1.5	Young	Self-seeded inside bramble	2		Fair	Good	40+	C2	3	0.9	No	
T044	Ash	Fraxinus excelsior	4.5	~ 75	1.5	1.5	1.5	1.5	Young	Self-seeded inside bramble scrub, multi stem at base	2		Fair	Good	40+	C2	3	0.9	No	
To45	Hawthorn	Crataegus monogyna	5.5	287	3	2.5	3.5	4	Semi mature		0		Good	Good	40+	C2	37	3.4	No	
To46	Hawthorn	Crataegus monogyna	5.5	150	2	2.5	3	3.5	Semi mature		0		Good	Good	40+	C2	10	1.8	No	
To47	Pear	Pyrus domestica	14.5	640	5	5	5	4	Mature	Deep cavity on east side of stem, with potenmtial to	2	S <sub>2</sub>	Good	Good	40+	В2	185	7.7	No	





			_	<u>.</u>	Ca	пору	Spread	(m)				Direction and			Estimated	BS			Nomber 605	Veteran
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	E	S	w	Life Stage	General Observations	Ground Clearance (m)	Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Remaining Contribution (years)	5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Tree Buffer Radius (m)
										support roosting bats										
To48	Hawthorn	Crataegus monogyna	4.5	335	2	2	2	2	Mature		1.5		Good	Good	40+	C2	51	4.0	No	
T049	Hawthorn	Crataegus monogyna	3.5	~ 350	0	3	4	3	Mature		1.5		Good	Good	40+	C2	55	4.2	No	
To50	Hawthorn	Crataegus monogyna	6	259	5	4	~ 3	4	Mature		0		Good	Good	40+	C2	30	3.1	No	
To51	Ash	Fraxinus excelsior	11.5	290	3.5	2.5	3.5	4	Semi mature		1.5	W2.5	Good	Good	40+	B2	38	3.5	No	
T052	Oak	Quercus robur	10	579	5	5	7	7	Semi mature		2	S <sub>2</sub>	Good	Good	40+	B2	152	6.9	No	
To <sub>53</sub>	Oak	Quercus robur	14	842	7.5	9	9	9	Early mature	Tight fork , multi stem, minor deadwood	2.5	S2	Fair	Good	40+	B2	321	10.1	No	
To54	Oak	Quercus robur	8	~ 670	5	5	6	6	Semi mature	Multi stem at 1m	2.5	S <sub>1</sub>	Good	Good	40+	B2	203	8.0	No	
To55	Oak	Quercus robur	13.5	~ 707	5.5	7.5	8	6	Early mature	Twin stem at 1.5m	3	S <sub>2</sub>	Good	Good	40+	B2	226	8.5	No	
To56	Oak	Quercus robur	9.5	~ 480	5	4.5	4	5	Semi mature		4	W2	Good	Good	40+	B2	104	5.8	No	
To57	Oak	Quercus robur	14.5	671	4	8	8	7	Early mature	Twin stem tight fork	2	S2.5	Fair	Good	40+	B2	204	8.1	No	
To <sub>5</sub> 8	Oak	Quercus robur	12.5	671	5.5	5.5	3	10	Early mature		2	SW1	Good	Good	40+	B2	204	8.1	No	
To59	Elder	Sambucus nigra	4.5	129	2.5	2.5	2.5	2.5	Mature		1		Good	Good	20-40	C <sub>2</sub>	8	1.5	No	
To6o	Elder	Sambucus nigra	3.5	129	2.5	2.5	2.5	2.5	Mature		0.5		Good	Good	20-40	C <sub>2</sub>	8	1.5	No	
To61	Hawthorn	Crataegus monogyna	4	212	2	3	3	2.5	Semi mature		1		Good	Good	40+	C2	20	2.5	No	
T062	Hawthorn	Crataegus monogyna	5	346	2.5	2.5	0.5	1.5	Semi mature		1		Good	Good	40+	C2	54	4.2	No	
To63	Hawthorn	Crataegus monogyna	6.5	346	4.5	4.5	4.5	4.5	Mature		1		Good	Good	40+	C2	54	4.2	No	





					Ca	nopy !	Spread	(m)				Direction and			Estimated	BS			vomber oog	Veteran
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	E	S	w	Life Stage	General Observations	Ground Clearance (m)	Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Remaining Contribution (years)	5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Tree Buffer Radius (m)
To64	Hawthorn	Crataegus monogyna	5	~ 300	2	2	2	2	Semi mature	No stem access	1		Good	Good	40+	C2	41	3.6	No	
To65	Hawthorn	Crataegus monogyna	5	~ 300	2	2	2	2	Semi mature	No stem access	1		Good	Good	40+	C2	41	3.6	No	
To66	Ash	Fraxinus excelsior	8.5	210	4	4	3	3	Semi mature	Signs of ash dieback, lesion present on stem	2.5	SE <sub>2</sub>	Fair	Fair	10-20	C2	20	2.5	No	
To67	Ash	Fraxinus excelsior	6.5	190	3	2.5	2	2	Semi mature	Signs of ash dieback, lesion present on stem	1	E1	Fair	Fair	10-20	C2	16	2.3	No	
To68	Ash	Fraxinus excelsior	3	75	2	2	2	2	Dead	Dead tree	0.5		Poor	Poor	<10		3	0.9	No	
To69	Hazel	Corylus avellana	4.5	158	4	4	0	2.5	Semi mature				Fair	Good	40+	C2	11	1.9	No	
T070	Hazel	Corylus avellana	4.5	189	4	3.5	1	3	Semi mature		0		Fair	Good	40+	C2	16	2.3	No	
T071	Ash	Fraxinus excelsior	9.5	360	3.5	3.5	3.5	3	Semi mature	Tight fork included bark	1	N1	Poor	Fair	10-20	C2	59	4.3	No	
T072	Ash	Fraxinus excelsior	9	360	5	4	2.5	4	Semi mature	Tight fork included bark	4	N4	Poor	Fair	10-20	C2	59	4.3	No	
To73	Lawsons Cypress	Chamaecyparis lawsoniana	4	130	1.5	2	2	0	Semi mature	Lost top	0		Poor	Fair	10-20	C2	8	1.6	No	
T074	Ash	Fraxinus excelsior	9.5	240	3.5	3	4	3	Semi mature		3	NW2.5	Fair	Fair	10-20	C2	26	2.9	No	
To75	Ash	Fraxinus excelsior	16.5	850	6	5	4	2.5	Mature	Potential to support roosting bats, significant strip of decay to south on stem at 4m height, good wildlife value	5	N <sub>7</sub>	Poor	Poor	<10		327	10.2	No	
To76	Ash	Fraxinus excelsior	15.5	900	4.5	5	~ 7	2	Mature	Veteran - significant hollowing, shaggy bracket fungi on main stem, abundant standing deadwood, cavities on stem	2	S <sub>3.5</sub>	Poor	Fair	20-40	Аз	366	10.8	Yes	13.5





																		LCODOCT	vomber oog	34039/3-01
			Troc	Chom	Ca	nopy !	Spread	l (m)			Cround	Direction and			Estimated	BS	Post	Radius	Votovon	Veteran
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	E	S	W	Life Stage	General Observations	Ground Clearance (m)	Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Remaining Contribution (years)	5837:2012 Quality Category	Root Protection Area (m2)	of RPA (m)	Veteran or Ancient?	Tree Buffer Radius (m)
										and branches, top retrenching, good lower crown with abundant epicormic growth										
T077	Ash	Fraxinus excelsior	8.5	304	3.5	2.5	3	2.5	Semi mature	Twin stem at base	1		Fair	Fair	10-20	C2	42	3.6	No	
To78	Ash	Fraxinus excelsior	11	~ 700	6.5	3.5	3.5	3.5	Early mature	Veteran- significant stem hollowing, stem cavities, regenerating crown, ash dieback suspected, some large standing and fallen deadwood.	3	E4	Poor	Fair	20-40	Аз	222	8.4	Yes	10.5
To79	Oak	Quercus robur	9.5	420	5	5.5	5.5	6	Semi mature		1.5	W2.5	Good	Good	40+	B2	80	5.0	No	
To8o	Oak	Quercus robur	20	~ 1150	~ 8	~ 12	7.5	~ 9	Mature	Lots of deadwood, canopy thin	4	S4	Fair	Fair	40+	B2	598	13.8	No	
To81	Goat willow	Salix caprea	4	84	1.5	1.5	1.5	1.5	Young	Growing inside pond	1		Good	Good	40+	C <sub>2</sub>	3	1.0	No	
To82	Sycamore	Acer pseudoplatanus	14	622	5.5	3.5	6.5	5	Early mature	Twin stem, tight fork at 1m height	1.5	S1.5	Fair	Good	40+	B2	175	7.5	No	
To83	Sycamore	Acer pseudoplatanus	14.5	568	5.5	6	6.5	4.5	Early mature	Multi stem at base	1	W1	Fair	Good	40+	B2	146	6.8	No	
To84	Elder	Sambucus nigra	7	367	3	3	~ 4	3.5	Mature	Half dead, multi stem at base	0.5		Fair	Poor	<10	U	61	4.4	No	
To85	Sycamore	Acer pseudoplatanus	11	318	4.5	~ 4·5	~ 4·5	4.5	Semi mature	Twin stem, tight fork	1	N1.5	Fair	Good	20-40	C2	46	3.8	No	
To86	Goat willow	Salix caprea	13.5	720	7	7	6.5	6.5	Mature	Multi stem at base	1		Fair	Fair	20-40	C <sub>2</sub>	235	8.6	No	
To87	Ash	Fraxinus excelsior	12.5	520	7	7	7	8	Semi mature	Small diameter deadwood on ground	1	W1.5	Fair	Fair	20-40	B2	122	6.2	No	
То88	Sycamore	Acer pseudoplatanus	13	537	5	~ 4	5	5	Semi mature	Multi stem at base, 1 dead stem,	1	S <sub>2</sub>	Fair	Good	20-40	B2	130	6.4	No	





					Ca	nopy	Spread	(m)				Direction						2000001	tomber oo	Veteran
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	E	S	W	Life Stage	General Observations	Ground Clearance (m)	and Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Estimated Remaining Contribution (years)	BS 5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Tree Buffer Radius (m)
To89	Sycamore	Acer pseudoplatanus	10.5	497	4.5	4.5	6	3.5	Semi mature	lvy on main stem	1.5	S1.5	Fair	Fair	20-40	B2	112	6.0	No	
T090	Turkey oak	Quercus cerris	10	280	4.5	4.5	4.5	4.5	Semi mature		1	NE2	Good	Good	40+	B1	35	3.4	No	
To91*	Ash	Fraxinus excelsior	13	290	5	7	5	~ 2.5	Semi mature	Suppressed by other trees, ivy on main stem, canopy biased towards the east	2	E <sub>3</sub>	Fair	Fair	20-40	C2	38	3.5	No	
T092	Hawthorn	Crataegus monogyna	5	~ 200	4	4	4	4	Semi mature		0		Good	Good	40+	C2	18	2.4	No	
To93	Blackthorn	Prunus spinosa	5.5	~ 250	2.5	3	3	3	Semi mature		0		Good	Good	20-40	C2	28	3.0	No	
To94	Hawthorn	Crataegus monogyna	5	~ 200	4	4	4	~ 4	Early mature		0		Good	Good	40+	C <sub>2</sub>	18	2.4	No	
To95	Hawthorn	Crataegus monogyna	6.5	433	4.5	4.5	4.5	4.5	Mature		0		Good	Good	40+	C <sub>2</sub>	85	5.2	No	
To <sub>9</sub> 6	Goat willow	Salix caprea	8.5	447	3.5	5.5	5	5	Semi mature		1	Eo.5	Fair	Good	40+	C <sub>2</sub>	90	5.4	No	
To97	Goat willow	Salix caprea	~ 8.5	277	4.5	4.5	0	3	Semi mature	Canopy suppressed by T96	0.5	No.5	Fair	Good	40+	C <sub>2</sub>	35	3.3	No	
To <sub>9</sub> 8	Horse Chestnut	Aesculus hippocastanum	6.5	346	4.5	5	4.5	4.5	Semi mature	Tight fork union, twin stem	1	E1	Fair	Good	40+	C <sub>2</sub>	54	4.2	No	
To99	Ash	Fraxinus excelsior	18	670	2	3.5	9	4	Early mature	Significant hollowing, linear cracks on stem, large epicormic growth, some fallen deadwood	3	S4	Poor	Fair	20-40	A3	203	8.0	Yes	10.05
T100	Ash	Fraxinus excelsior	14.5	440	6	6	~ 6	6	Semi mature	Shaggy bracket on stem, lots of deadwood, ash dieback present	2.5	E2.5	Fair	Poor	10-20	C2	88	5.3	No	
T101	Lombardy Poplar	Populus nigra 'Italica'	20.5	~ 800	2.5	2.5	2.5	2.5	Mature	lvy on main stem	3		Good	Good	20-40	B2	290	9.6	No	
T102	Hawthorn	Crataegus monogyna	5	259	4	4	5	2	Early mature		0		Good	Good	40+	C2	30	3.1	No	





																		LCODOCT	Normber 005	5403973-01
			Tree	Stem	Ca	пору	Spread	(m)			Ground	Direction and			Estimated	BS	Root	Radius	Veteran	Veteran Tree
Ref No.	Common Name	Scientific Name	Height (m)	Diameter (mm)	N	E	S	w	Life Stage	General Observations	Clearance (m)	Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Remaining Contribution (years)	5837:2012 Quality Category	Protection Area (m2)	of RPA (m)	or Ancient?	Buffer Radius (m)
T103	Hawthorn	Crataegus monogyna	5.5	245	3.5	2	2.5	2	Early mature		0		Good	Good	40+	C2	27	2.9	No	
T104	Ash	Fraxinus excelsior	11	~ 700	5	5	5	4.5	Early mature	Major ivy on main stem, advanced ash dieback	2.5	N2.5	Fair	Poor	<10	U	222	8.4	No	
T105	Ash	Fraxinus excelsior	14.5	~ 750	7	7	5.5	5.5	Early mature	Major ivy on main stem, advanced ash dieback	3	S <sub>3</sub>	N/A	Poor	<10	U	254	9.0	No	
T106	Lombardy Poplar	Populus nigra 'Italica'	25	~ 1000	2	3.5	2	2	Mature		3		Good	Good	20-40	B2	452	12.0	No	
T107	Ash	Fraxinus excelsior	9.5	550	6.5	~ 6	5	3.5	Mature	Shaggy bracket on stem, old coppice stool	2.5	N2.5	Fair	Poor	<10	U	137	6.6	No	
T108	Lombardy Poplar	Populus nigra 'Italica'	25	~ 1000	2.5	3.5	2.5	2.5	Mature	lvy on main stem	2		Good	Good	20-40	B2	452	12.0	No	
T109	Lombardy Poplar	Populus nigra 'Italica'	20.5	700	2.5	3.5	2.5	2.5	Mature	Minor ivy on main stem	3		Good	Good	20-40	B2	222	8.4	No	
T110	Poplar	Populus sp(p)	25	~ 900	2.5	3.5	2.5	2.5	Mature		3		Good	Good	20-40	B2	366	10.8	No	
T111	Ash	Fraxinus excelsior	10.5	1110	6	9.5	3.5	3.5	Mature	Lost top, significant hollowing, good lower regenerating epicormic growth, fallen deadwood, cavities on branches, owl pellets inside stem	1.5	No.5	Poor	Fair	20-40	Аз	557	13.3	Yes	16.65
T112	Beech	Fagus sylvatica	17	~ 850	7	4	3	7	Early mature	Unable to access stem	6	W8	Fair	Good	40+	B2	327	10.2	No	
T113	Beech	Fagus sylvatica	17	~ 850	8	5	10	8	Early mature	Unable to access stem	1	S4.5	Good	Good	40+	B2	327	10.2	No	
T114	Beech	Fagus sylvatica	17.5	~ 1000	8	8	8	8	Early mature	Unable to access stem, deadwood at top of crown, crown lifting on south side of stem	2	W4	Fair	Fair	40+	B2	452	12.0	No	
T115	Horse Chestnut	Aesculus hippocastanum	18.5	880	8	6	7	3.5	Mature	Major cavity on north side of stem	5	W <sub>5</sub>	Fair	Good	40+	B2	350	10.6	No	





				Charry	Ca	nopy !	Spread	(m)			Current	Direction and			Estimated	BS	D			Veteran
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	E	S	w	Life Stage	General Observations	Ground Clearance (m)	Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Remaining Contribution (years)	5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Tree Buffer Radius (m)
T116	Beech	Fagus sylvatica	23	990	8.5	3	9	5.5	Mature	Major historic crown lifting work on north side of stem	1.5	S <sub>2</sub>	Fair	Good	40+	B2	443	11.9	No	
T117	Horse Chestnut	Aesculus hippocastanum	10.5	707	7	7	7	7	Early mature	Twin stem, tight fork union	1	N4	Fair	Good	40+	B2	226	8.5	No	
T118	Oak	Quercus robur	10	430	6.5	3.5	6	5	Early mature	Twin stem/ 1 stem died off, flailed to east side	3	N2	Fair	Good	40+	В3	84	5.2	No	
T119	Oak	Quercus robur	10.5	~ 531	4.5	4.5	5	5	Semi mature	Twin stem at base, flailed to east side	3	NW2.5	Good	Good	40+	В3	128	6.4	No	
T120	Oak	Quercus robur	8.5	800	5	3	4	5	Early mature	Stag headed, regenerating crown	3.5	N3.5	Fair	Good	40+	В3	290	9.6	No	
T121	Cherry	Prunus avium	7.5	277	6.5	4	5.5	4	Early mature	Multi stem at base	2		Good	Good	20-40	C2	35	3.3	No	
T122	Ash	Fraxinus excelsior	14.5	420	6.5	5	9	6	Semi mature	Signs of ash dieback, deadwood in crown	2.5	S2.5	Fair	Poor	10-20	C2	80	5.0	No	
T123	Ash	Fraxinus excelsior	14.5	424	6.5	5	5	5	Semi mature	Multi stem at base, ash dieback suspected, deadwood on ground	1	SE1	Fair	Poor	10-20	C2	81	5.1	No	
T124	Ash	Fraxinus excelsior	14.5	~ 393	4.5	4	4	4	Semi mature	Multi stem, ash dieback, ivy on main stem	4	S <sub>3.5</sub>	Fair	Fair	20-40	C2	70	4.7	No	
T125	Ash	Fraxinus excelsior	15.5	700	6	6.5	7.5	6.5	Early mature	Minor deadwood in crown, minor ivy on stem	2.5	S2.5	Good	Fair	20-40	B2	222	8.4	No	
T126	Ash	Fraxinus excelsior	12.5	551	3.5	6.5	5	5	Early mature	Ash dieback, multi stem at base	0.5	S <sub>1</sub>	Fair	Fair	10-20	C2	137	6.6	No	
T127	Ash	Fraxinus excelsior	12	475	5	6	3.5	3	Semi mature	Multi stem at base, advanced ash dieback	0	N1	Poor	Poor	<10	U	102	5.7	No	
T128	Ash	Fraxinus excelsior	12	574	4.5	6	8	6.5	Semi mature	Multi stem at 1.5m height	0.5	<b>S</b> 1	Fair	Fair	10-20	C2	149	6.9	No	





				C1	Ca	nopy !	Spread	(m)			Correct	Direction and			Estimated	BS	D4		Veterre.	Veteran
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	E	S	w	Life Stage	General Observations	Ground Clearance (m)	Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Remaining Contribution (years)	5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Tree Buffer Radius (m)
T129	Ash	Fraxinus excelsior	12.5	478	4	5	3	4	Semi mature	Heavy ivy on main stem, ash dieback suspected, multi stem at base	1	S1	Fair	Fair	10-20	C2	103	5.7	No	
T130	Ash	Fraxinus excelsior	12.5	430	3.5	5.5	5	6	Semi mature	Minor ivy on stem, ash dieback	0.5	N1.5	Good	Fair	20-40	C2	84	5.2	No	
T131	Ash	Fraxinus excelsior	12.5	450	5.5	6.5	6	6	Semi mature	Minor ivy on stem, early signs of ash dieback	0.5	S1	Good	Fair	20-40	C2	92	5.4	No	
T132	Ash	Fraxinus excelsior	12.5	465	3	5	6	3	Semi mature	Multi stem at base, ash dieback suspected	3	S <sub>3</sub>	Fair	Fair	20-40	C2	98	5.6	No	
T133	Ash	Fraxinus excelsior	12.5	627	7.5	5	5	5	Semi mature	Multi stem at base, tight fork union, small cavity at base	0.5	\$1.5	Fair	Fair	20-40	C2	178	7.5	No	
T134	Oak	Quercus robur	10	380	4.5	5	5	5	Semi mature	Small cavity at base	0	W2.5	Good	Good	40+	B2	65	4.6	No	
T135	Ash	Fraxinus excelsior	11	370	7	6.5	6	5	Semi mature	Deadwood in crown	3	E3	Good	Fair	20-40	C2	62	4.4	No	
T136	Ash	Fraxinus excelsior	11.5	360	6	5	6	4	Semi mature	Two dead stems at base, cavity at base, small deadwood in crown	0.5	N <sub>3</sub>	Fair	Fair	20-40	C2	59	4.3	No	
T137	Ash	Fraxinus excelsior	9	370	5	5	5	5	Semi mature	Some fallen dead wood	3-5	E <sub>3.5</sub>	Good	Fair	20-40	C2	62	4.4	No	
T138	Ash	Fraxinus excelsior	9	320	5	5	5	5	Semi mature		2	W2	Good	Fair	20-40	C2	46	3.8	No	
T139	Field maple	Acer campestre	7	270	2	2.5	4	2	Semi mature	Small cavity on north side of stem, flailed on the north and south sides of canopy	2	W1.5	Good	Good	40+	B2	33	3.2	No	
T140	Ash	Fraxinus excelsior	12	480	7	5	6	6.5	Early mature	Small deadwood in crown	3.5	W4	Good	Fair	20-40	B2	104	5.8	No	
T141	Ash	Fraxinus excelsior	8	390	5	5	5	5	Semi mature	Three dead stems at base	4	W1	Fair	Fair	20-40	C2	69	4.7	No	



			Terr	Charr	Ca	nopy !	Spread	(m)			Current	Direction and			Estimated	BS	Door	Dadius		Veteran
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	Е	S	w	Life Stage	General Observations	Ground Clearance (m)	Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Remaining Contribution (years)	5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Tree Buffer Radius (m)
T142	Ash	Fraxinus excelsior	10.5	830	5.5	6	7	6	Mature	Significant hollowing, snapped out top, new lower epicormic growth regenerating crown, fallen deadwood around tree.	0.5	W3	Poor	Fair	20-40	А3	312	10.0	Yes	12.45
T143	Ash	Fraxinus excelsior	9	339	6	6	5.5	6	Semi mature	Twin stem, water pocket at base	2.5	E3	Fair	Fair	10-20	C2	52	4.1	No	
T144	Ash	Fraxinus excelsior	10.5	300	6	7	5	3.5	Semi mature	Cavity at base, one stem dead, small deadwood in crown	2	SW2.5	Fair	Fair	20-40	C2	41	3.6	No	
T145	Ash	Fraxinus excelsior	10.5	320	6	5	6	3	Early mature	Multi stem at base	3	S4	Fair	Fair	20-40	C2	46	3.8	No	
T146	Ash	Fraxinus excelsior	10.5	370	5	3.5	6	5	Early mature	Abundant deadwood in crown	2.5	NW2.5	Fair	Poor	10-20	C2	62	4.4	No	
T147	Oak	Quercus robur	5.5	270	4	4	4	4	Semi mature		1.5	W1.5	Good	Good	40+	C2	33	3.2	No	
T148	Ash	Fraxinus excelsior	10.5	700	6	6	8	8	Early mature	Cavity on main stem at base, small deadwood in crown, ash dieback suspected	5	W5	Fair	Fair	20-40	B2	222	8.4	No	
T149	Horse Chestnut	Aesculus hippocastanum	5	130	2	2	2	2	Young		1.5	W1.5	Good	Good	40+	C2	8	1.6	No	
T150	Ash	Fraxinus excelsior	6.5	~ 700	4	4	4	4	Mature	Significant hollowing stem, newly regenerating crown, large deadwood around base of tree, high wildlife value, growing inside pond	0.5	E1	Poor	Fair	10-20	Аз	222	8.4	Yes	10.5





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					Ca	nopy !	Spread	(m)				Direction and			Estimated	BS				Veteran
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	E	S	w	Life Stage	General Observations	Ground Clearance (m)	Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Remaining Contribution (years)	5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Tree Buffer Radius (m)
T151	Ash	Fraxinus excelsior	9	421	4	4	4	4	Semi mature	Muti stem at base, lots of deadwood present in crown	1	W1	Fair	Fair	10-20	C2	80	5.1	No	
T152	Ash	Fraxinus excelsior	9.5	380	5	5	5	5	Semi mature	Multi stem at base, growing in dyke	2	N <sub>2</sub>	Fair	Fair	20-40	C2	65	4.6	No	
T153	Ash	Fraxinus excelsior	10	250	6	6	4	4	Semi mature	Broken stem at base, ash dieback suspected	3	W <sub>3</sub>	Fair	Fair	20-40	C2	28	3.0	No	
T154	Ash	Fraxinus excelsior	8.5	349	5	5	4	5	Semi mature	Multi stem, advanced ash dieback	2	N2	Fair	Poor	<10	U	55	4.2	No	
T155	Field maple	Acer campestre	7.5	367	4	4	2.5	3	Early mature	Twin stem at base	0.5		Fair	Good	40+	C2	61	4.4	No	
T156	Field maple	Acer campestre	8	254	4	4	4	4	Semi mature	Twin stem, dead	1		Poor	Poor	<10	U	29	3.0	No	
T157	Elm	Ulmus sp(p)	7.5	291	2.5	2.5	2.5	2.5	Semi mature	Multi stem at base	0.5		Good	Good	20-40	C2	38	3.5	No	
T158	Hawthorn	Crataegus monogyna	5.5	160	2	2	2	2	Early mature		0.5		Good	Good	40+	C2	12	1.9	No	
T159	Ash	Fraxinus excelsior	13.5	466	6	7	5	5	Semi mature	Ash dieback suspected, multi stem at base	0.5		Fair	Fair	10-20	C2	98	5.6	No	
T160	Field maple	Acer campestre	8	381	2	5	3	4	Semi mature	Nearly dead, five stems but only one just alive	0.5		Poor	Poor	<10	U	66	4.6	No	
T161	Ash	Fraxinus excelsior	10.5	339	6	6	3.5	6.5	Semi mature	Multi stem at base	1	W2	Fair	Fair	10-20	C2	52	4.1	No	
T162	Ash	Fraxinus excelsior	11	230	1.5	4.5	4	4	Semi mature	Cavity on east side of stem	3	S <sub>3</sub>	Fair	Fair	10-20	C2	24	2.8	No	
T163	Ash	Fraxinus excelsior	8.5	200	2	1	4	5.5	Semi mature	Leaning west	3.5	SW4	Fair	Fair	10-20	C2	18	2.4	No	
T164	Ash	Fraxinus excelsior	13	980	8	8	4	8	Mature	Branch snapped but no hollowing, cavities on main scaffold northwest side	1.5	N4	Poor	Fair	20-40	В2	434	11.8	No	





			_		Ca	nopy !	Spread	(m)				Direction and			Estimated	BS			Nomber 605	Veteran
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	E	S	w	Life Stage	General Observations	Ground Clearance (m)	Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Remaining Contribution (years)	5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Tree Buffer Radius (m)
T165	Field maple	Acer campestre	11.5	480	7	7	7	7	Mature	Top snapped off	0.5	S <sub>3</sub>	Good	Fair	40+	B2	104	5.8	No	
T166	Ash	Fraxinus excelsior	11.5	750	6	8	7.5	6	Early mature	Top snapped off, big standing deadwood in crown, cavity on main stem at 4m height	3	W1	Fair	Fair	10-20	C2	254	9.0	No	
T167	Oak	Quercus robur	20	1010	7.5	9	9.5	12.5	Mature	Minor deadwood in crown	1	W2.5	Good	Good	40+	A2	461	12.1	No	
T168	Sycamore	Acer pseudoplatanus	16	1050	9	9	9	9	Mature	Major ivy on main stem, minor deadwood in crown, large amount of epicormic shoots at base	0	N <sub>3</sub>	Good	Good	40+	A2	499	12.6	No	
T169	Sycamore	Acer pseudoplatanus	16	980	7	10	10	10	Mature	lvy cover on main stem, minor deadwood in crown	2.5	SW2.5	N/A	Good	40+	A2	434	11.8	No	
T170	Sycamore	Acer pseudoplatanus	16	970	5	10	7	12	Mature	Twin stem at base, tight fork union	1	W3	N/A	Good	40+	B2	426	11.6	No	
T171	Sycamore	Acer pseudoplatanus	16	650	5	12	3	7.5	Mature	lvy on stem, major deadwood in crown, suppressed by neighbouring trees	0	W4	N/A	Fair	20-40	C2	191	7.8	No	
T172	Ash	Fraxinus excelsior	16	980	10	10	7	10	Mature	lvy cover on main stem, deadwood in crown, cavities in branches	3	NW6	N/A	Fair	20-40	B2	434	11.8	No	
T <sub>173</sub>	Ash	Fraxinus excelsior	16	820	11	10	2	10	Early mature	Major ivy cover stem, ash dieback suspected, deadwood in crown	2.5	N <sub>2</sub>	N/A	Fair	10-20	C2	304	9.8	No	
T174	Ash	Fraxinus excelsior	16	360	4	4	4	4	Semi mature	Dead, ivy cover on stem	0		Poor	Poor	<10	U	59	4.3	No	





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Ref	Common		Tree	Stem	Ca	nopy !	Spread	(m)	Life	General	Ground	Direction and Height	Structural	Physiological	Estimated Remaining	BS 5837:2012	Root	Radius	Veteran	Veteran Tree
No.	Name	Scientific Name	Height (m)	Diameter (mm)	N	E	S	W	Stage	Observations	Clearance (m)	(m) of Lowest Branch	Condition	Condition	Contribution (years)	Quality Category	Protection Area (m2)	of RPA (m)	or Ancient?	Buffer Radius (m)
T175	Sycamore	Acer pseudoplatanus	15.5	970	11	11	11	11	Mature	lvy cover on stem, minor deadwood in crown	3	S4	N/A	Good	40+	A2	426	11.6	No	
T176	Ash	Fraxinus excelsior	15.5	940	10	10	10	10	Mature	Ash dieback suspected, minor deadwood on ground	1.5	S <sub>3</sub>	Good	Fair	20-40	B2	400	11.3	No	
T177	Sycamore	Acer pseudoplatanus	16	750	8.5	8.5	8.5	8.5	Early mature	lvy cover on main stem	3	N <sub>3</sub>	N/A	Good	40+	B2	254	9.0	No	
T178	Sycamore	Acer pseudoplatanus	14.5	700	6.5	5	6	5	Early mature	Ivy on main stem, small cavities at base, minor deadwood in crown	3	N <sub>3</sub>	N/A	Fair	40+	B2	222	8.4	No	
T179	Ash	Fraxinus excelsior	11	534	7.5	6	6	5.5	Semi mature	Multi stem at base, cavities at base, ash dieback suspected, deadwood in crown	0.5	E1	Fair	Fair	20-40	C2	129	6.4	No	
T180	Ash	Fraxinus excelsior	9	415	5	5	4	5	Semi mature	Multi stem at base	3		Fair	Fair	20-40	C2	78	5.0	No	
T181	Ash	Fraxinus excelsior	6	311	3	3	3	3	Semi mature	Twin stem at base			Fair	Fair	20-40	C <sub>2</sub>	44	3.7	No	
T182	Ash	Fraxinus excelsior	11.5	336	5	6.5	6.5	6	Semi mature	Multi stem at base, included bark at base, deadwood in crown	3⋅5	W2.5	Fair	Fair	20-40	C2	51	4.0	No	
T183	Oak	Quercus robur	6.5	270	1.5	4.5	3	3.5	Semi mature	Twin stem at base, northside stem heavily reduced, deadwood in crown	1	E1.5	Good	Good	40+	C2	33	3.2	No	
T184	Crab apple	Malus sylvestris	8	353	6	3.5	5	3.5	Mature	Tree growing inside hedge	0.5		Good	Good	20-40	B2	56	4.2	No	
T185	Apple	Malus domestica	8	340	6	2.5	2.5	2.5	Mature	Tree growing inside hedge	0.5		Good	Good	20-40	B2	52	4.1	No	
T186	Crab apple	Malus sylvestris	9	588	5	5	5	5	Mature	Multi stem at base, growing in hedge	0.5		Good	Good	20-40	B2	156	7.1	No	





					Ca	nopy !	Spread	(m)				Direction and			Estimated	BS			vorriber 005	Veteran
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	E	S	w	Life Stage	General Observations	Ground Clearance (m)	Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Remaining Contribution (years)	5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Tree Buffer Radius (m)
T187	Ash	Fraxinus excelsior	9	260	4.5	4.5	4.5	4.5	Semi mature	Suspected ash dieback	1	SW <sub>2</sub>	Good	Fair	20-40	C2	31	3.1	No	
T188	Ash	Fraxinus excelsior	7.5	250	4	4	4	4	Semi mature		2	W2	Good	Fair	20-40	C2	28	3.0	No	
T189	Crab apple	Malus sylvestris	7	360	5	5	5	5	Mature		0.5	E1	Good	Fair	20-40	B2	59	4.3	No	
T190	Hawthorn	Crataegus monogyna	5	160	2	2	2	2	Early mature	Part of a hedge	1		Fair	Good	40+	C2	12	1.9	No	
T191	Beech	Fagus sylvatica	5.5	210	3	3	3	3	Semi mature				Good	Good	40+	C2	20	2.5	No	
T192	Ash	Fraxinus excelsior	7.5	360	4	4	4	4	Semi mature	Multi stem at 1.5m height	0.5		Fair	Good	20-40	C2	59	4.3	No	
T193	Ash	Fraxinus excelsior	6.5	430	4.5	4.5	4.5	4.5	Semi mature	Multi stem at 1.5m height	0.5	E1	Fair	Good	20-40	C2	84	5.2	No	
T194	Norway maple	Acer platanoides	6.5	250	3.5	3.5	3.5	3.5	Semi mature	Multi stem at 1.5m height	1	E1	Fair	Good	40+	C2	28	3.0	No	
T195	Field maple	Acer campestre	4.5	240	4	4	4	4	Semi mature		0.5		Good	Good	40+	C2	26	2.9	No	
T196	Ash	Fraxinus excelsior	7.5	320	4.5	4.5	4.5	4.5	Semi mature	Tight fork union at 1.5m height	1	W1	Fair	Good	20-40	C2	46	3.8	No	
T197	Field maple	Acer campestre	4	180	3	3	3	3	Semi mature		1	E1	Good	Good	40+	C2	15	2.2	No	
T198	Beech	Fagus sylvatica	6	180	4	4	4	4	Semi mature	Rubbing branches at 1.5m	0.5	NWo.5	Fair	Good	40+	C2	15	2.2	No	
T199	Small-leaved Lime	Tilia cordata	5	160	2.5	2.5	2.5	2.5	Semi mature		0		Good	Good	40+	C2	12	1.9	No	
T200	Horse chestnut	Aesculus hippocastanum	5.5	180	3	3	3	3	Semi mature		1	E1	Good	Good	40+	C2	15	2.2	No	
T201	Ash	Fraxinus excelsior	8	290	3.5	3.5	3.5	3.5	Semi mature		1	N1	Good	Fair	20-40	C2	38	3.5	No	
T202	Ash	Fraxinus excelsior	7.5	270	4	4	4	4	Semi mature		1	W2.5	Good	Good	20-40	C2	33	3.2	No	
T203	Small-leaved Lime	Tilia cordata	4.5	150	2	2	2	2	Semi mature		0.5		Good	Good	40+	C2	10	1.8	No	







			_	6.	Ca	пору	Spread	(m)			6 1	Direction and			Estimated	BS			vorriber oog	Veteran
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	E	S	w	Life Stage	General Observations	Ground Clearance (m)	Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Remaining Contribution (years)	5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Tree Buffer Radius (m)
T204	Ash	Fraxinus excelsior	4.5	226	2.5	2.5	2.5	2.5	Semi mature		0.5		Fair	Good	20-40	C2	23	2.7	No	
T205	Norway maple	Acer platanoides	5.5	228	3.5	3.5	3.5	3.5	Semi mature		0.5		Fair	Good	40+	C <sub>2</sub>	24	2.7	No	
T206	Beech	Fagus sylvatica	3.5	223	1.5	1.5	1.5	1.5	Young	Multi stem at base			Fair	Good	40+	C <sub>2</sub>	22	2.7	No	
T207	Hawthorn	Crataegus monogyna	6.5	260	3	3	3	3	Early mature		0		Fair	Good	40+	C2	31	3.1	No	
T208	Norway maple	Acer platanoides	5.5	160	3	3	3	3	Semi mature		1	E1	Good	Good	40+	C <sub>2</sub>	12	1.9	No	
T209	Ash	Fraxinus excelsior	6.5	238	3	2	3	3	Semi mature		0.5		Fair	Fair	20-40	C2	26	2.9	No	
T210	Field maple	Acer campestre	5	160	4	4	4	4	Semi mature		0.5		Good	Good	40+	C <sub>2</sub>	12	1.9	No	
T211	Ash	Fraxinus excelsior	3	120	1.5	1.5	1.5	1.5	Young		0.5		Fair	Fair	10-20	C <sub>2</sub>	7	1.4	No	
T212	Field maple	Acer campestre	3	169	1.5	1.5	1.5	1.5	Young		0.5		Fair	Good	40+	C <sub>2</sub>	13	2.0	No	
T213	Hornbeam	Carpinus betulus	6.5	150	3	3	3	3	Semi mature		1		Fair	Good	20-40	C2	10	1.8	No	
T214	Field maple	Acer campestre	3.5	120	2	2	2	2	Semi mature		0.5		Good	Good	40+	C <sub>2</sub>	7	1.4	No	
T215	Small-leaved Lime	Tilia cordata	2.5	75	0.5	0.5	0.5	0.5	Young		1		Good	Good	40+	C <sub>2</sub>	3	0.9	No	
T216	Horse chestnut	Aesculus hippocastanum	3.5	130	2	2	2	2	Semi mature		1		Good	Good	40+	C2	8	1.6	No	
T217	Horse Chestnut	Aesculus hippocastanum	2.5	100	1	1	1	1	Young		1		Good	Good	40+	C2	5	1.2	No	
T218	Ash	Fraxinus excelsior	9	323	5	5	5	5	Semi mature	Ash dieback suspected, multi stem at base	1.5	S <sub>2</sub>	Good	Fair	20-40	C2	47	3.9	No	
T219	Small-leaved Lime	Tilia cordata	2.5	100	1	1	1	1	Young		1		Good	Good	40+	C2	5	1.2	No	
T220	Beech	Fagus sylvatica	3.5	150	2	2	2	2	Semi mature		1		Good	Good	40+	C <sub>2</sub>	10	1.8	No	





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Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	E	S	w	Life Stage	General Observations	Ground Clearance (m)	Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Remaining Contribution (years)	5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Tree Buffer Radius (m)
T221	Small-leaved Lime	Tilia cordata	3.5	180	2	2	2	2	Semi mature		0.5		Good	Good	40+	C2	15	2.2	No	
T222	Horse chestnut	Aesculus hippocastanum	3.5	110	2	2	2	2	Semi mature		1		Good	Good	40+	C2	5	1.3	No	
T223	Ash	Fraxinus excelsior	5	150	3	3	3	2	Semi mature		0.5		Fair	Fair	20-40	C2	10	1.8	No	
T224	Beech	Fagus sylvatica	3.5	100	1.5	1.5	1.5	1.5	Semi mature		0.5		Good	Good	40+	C2	5	1.2	No	
T225	Ash	Fraxinus excelsior	4	100	2	2	2	2	Semi mature		1	S <sub>1</sub>	Good	Fair	20-40	C2	5	1.2	No	
T226	Field maple	Acer campestre	6.5	200	4.5	4.5	4.5	4.5	Semi mature		0.5		Good	Good	40+	C2	18	2.4	No	
T227	Ash	Fraxinus excelsior	6.5	254	4	4	4	4	Semi mature	Twin stem at 1m height	0.5		Fair	Fair	20-40	C2	29	3.0	No	
T228	Norway maple	Acer platanoides	5	170	4	4	4	4	Semi mature		0.5		Good	Good	40+	C2	13	2.0	No	
T229	Small-leaved Lime	Tilia cordata	5	200	4	4	4	4	Semi mature		0		Good	Good	40+	C2	18	2.4	No	
T230	Small-leaved Lime	Tilia cordata	4	150	2.5	2.5	2.5	2.5	Semi mature				Good	Good	40+	C2	10	1.8	No	
T231	Elm	Ulmus sp(p)	2.5	75	1	1	1	1	Young		0		Fair	Fair	10-20	C <sub>2</sub>	3	0.9	No	
T232	Ash	Fraxinus excelsior	7.5	254	4	4	4	4	Semi mature	Twin stem at 1m height	0.5		Fair	Fair	20-40	C2	29	3.0	No	
T233	Small-leaved Lime	Tilia cordata	4.5	160	3	3	3	3	Semi mature		0		Good	Good	40+	C2	12	1.9	No	
T234	Norway maple	Acer platanoides	6.5	210	5	5	5	5	Semi mature		0	N1.5	Good	Good	40+	C2	20	2.5	No	
T <sub>235</sub>	Ash	Fraxinus excelsior	7	350	6	6	6	6	Semi mature		0.5	W1.5	Good	Good	20-40	C2	55	4.2	No	
T236	Ash	Fraxinus excelsior	7	220	4	4	4	4	Semi mature		0.5	S <sub>2</sub>	Fair	Fair	20-40	C2	22	2.6	No	
T <sub>237</sub>	Ash	Fraxinus excelsior	7.5	310	5	5	5	5	Semi mature		0.5	N2	Good	Good	20-40	C2	43	3.7	No	







																		LCODOCT	number oog	54°39/3-
					Ca	nopy	Spread	l (m)				Direction and			Estimated	BS				Vetera
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	E	S	w	Life Stage	General Observations	Ground Clearance (m)	Height (m) of Lowest Branch	Structural Condition	Physiological Condition	Remaining Contribution (years)	5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Tree Buffei Radiu: (m)
T238	Field maple	Acer campestre	5	250	4	4	4	4	Semi mature		0.5		Good	Good	40+	C <sub>2</sub>	28	3.0	No	
T239	Ash	Fraxinus excelsior	7	418	5	5	5	5	Semi mature	Twin stem at 1m height	0	Wo.5	Good	Good	20-40	C2	79	5.0	No	
T240	Horse chestnut	Aesculus hippocastanum	6	200	4	4	4	4	Semi mature		0		Good	Good	40+	C2	18	2.4	No	
T241	Field maple	Acer campestre	4.5	~ 220	4	4	4	4	Semi mature				Good	Good	40+	C <sub>2</sub>	22	2.6	No	
T242	Ash	Fraxinus excelsior	6.5	240	4	4	4	4	Semi mature		0.5		Fair	Fair	20-40	C <sub>2</sub>	26	2.9	No	
T243	Small-leaved Lime	Tilia cordata	5	180	3	3	3	3	Semi mature		0		Good	Good	40+	C <sub>2</sub>	15	2.2	No	
T244	Norway maple	Acer platanoides	6.5	320	4	4	4	4	Semi mature		1	E1	Good	Good	40+	C2	46	3.8	No	
T245	Ash	Fraxinus excelsior	13.5	~ 1200	5	8	8	6	Early mature	Top dying back, large deadwood present, unable to access stem, dyke at front of stem	3		N/A	Poor	10-20	C2	651	14.4	No	
T246	Sycamore	Acer pseudoplatanus	11.5	420	6	6	7.5	7.5	Semi mature	Deadwood on ground	4	N4	Good	Good	40+	B2	80	5.0	No	
T247	Ash	Fraxinus excelsior	12	460	6	6	6	6	Semi mature	Ash dieback suspected in crown, deadwood in crown	0.5	S <sub>3.5</sub>	Fair	Poor	10-20	C2	96	5.5	No	
T248	Elder	Sambucus nigra	2.5	120	1	1	1	1	Mature		0		Good	Good	10-20	C <sub>2</sub>	7	1.4	No	
T249	Ash	Fraxinus excelsior	14	339	6	1	6	6	Semi mature	Unable to access stem, ash dieback suspected in canopy	3	W <sub>3</sub>	Fair	Poor	10-20	C <sub>2</sub>	52	4.1	No	
T250	Ash	Fraxinus excelsior	14	325	6	2	6	2	Semi mature	Ivy cover stem, unable to access stem	3	S4	Fair	Fair	10-20	C2	48	3.9	No	
T251	Ash	Fraxinus excelsior	10.5	282	5	6	4	2	Semi mature	Unable to access stem, ash dieback suspected in canopy	3	W <sub>3</sub>	Fair	Poor	10-20	C <sub>2</sub>	36	3.4	No	



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Ref	Common		Tree	Stem	Ca	пору	Spread	(m)	Life	General	Ground	Direction and Height	Structural	Physiological	Estimated Remaining	BS 5837:2012	Root	Radius	Veteran	Veteran Tree
No.	Name	Scientific Name	Height (m)	Diameter (mm)	N	E	S	w	Stage	Observations	Clearance (m)	(m) of Lowest Branch	Condition	Condition	Contribution (years)	Quality Category	Protection Area (m2)	of RPA (m)	or Ancient?	Buffer Radius (m)
T252	Ash	Fraxinus excelsior	11	950	6	5	5.5	5.5	Mature	Significant hollowing stem, linear crack on main stem, fungus bracket on stem, new regenerating crown	1	S1	Poor	Fair	20-40	Аз	408	11.4	Yes	14.25
T253	Oak	Quercus robur	12.5	950	7	7	9	9	Mature	Hollowing on main stem, deadwood around base. Nest in main stem, major deadwood in crown	2	S1.5	Fair	Good	40+	A3	408	11.4	Yes	14.25
T254	Oak	Quercus robur	10	850	6.5	6.5	6.5	6.5	Early mature	Big wound to south of stem snapped out limb, deadwood in crown	1	N1	Fair	Fair	40+	B2	327	10.2	No	
T <sub>255</sub>	Oak	Quercus robur	9	850	4	4	4	4	Early mature	Can't access stem, dead top, growing side of a dyke.	0	SW1.5	Poor	Fair	40+	B2	327	10.2	No	
T256	Oak	Quercus robur	10	900	6	6	6	6	Early mature	Heavy ivy cover stem, deadwood in crown	1	S2.5	N/A	Fair	40+	B2	366	10.8	No	
W1	Holm Oak, Sycamore, Elm, Oak, Blackthorn, Elder, Goat Willow, Rowan, Silver Birch	Quercus ilex, Acer pseudoplatanus, Ulmus sp, Quercus robur, Prunus spinosa, Sambucus nigra, Salix caprea, Sorbus aucuparia, Betula pendula	21	1216				9	Early mature	Sycamore dominant, frequent- silver birch oak goat willow (mostly semi-mature, few early mature) mature Sycamore at north end. Registered as ancient woodland on MAGIC maps¹.			Good	Good	40+	Аз	669	14.6	Yes	15
W2	Larch, Oak, Sycamore, Hawthorn, Blackthorn, Beech, Silver Birch, Ash	Larix decidua, Quercus robur, Acer pseudoplatanus, Crataegus monogyna, Prunus spinosa, Fagus sylvatica, Betula	18.5	880	~ 8	9	~ 8	~ 8	Early mature	Semi-early mature plantation consisting mostly of sycamore (dominant),the remaining species	4		Good	Good	40+	В3	350	10.6	No	





					Car	ору!	Spread	(m)				Direction and			Estimated	BS				Veteran
Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	N	E	S	w	Life Stage	General Observations	Ground Clearance (m)	Hoight	Structural Condition	Physiological Condition		5837:2012 Quality Category	Root Protection Area (m2)	Radius of RPA (m)	Veteran or Ancient?	Tree Buffer Radius (m)
		pendula, Fraxinus excelsior								occasional to rarely present										
W <sub>3</sub>	Scots Pine, Hawthorn, Sycamore, Downy Birch, Larch, Spruce, Elder, Pine	Pinus sylvestris, Crataegus monogyna, Acer pseudoplatanus, Betula pubescens, Larix decidua, Picea sp., Sambucus nigra, Pinus sp.	20	410		9			Early mature	Scots Pine and Spruce are the dominant species			Good	Good	40+	B2	76	4.9	No	





# Appendix 2. Definitions for Tree Survey Schedule

Term	Definition								
Tree Reference	Unique identifice each tree or gro	cation number together with the Field Reference given to oup.							
	Corresponding Woodland	number on plan –T = Tree / H = Hedge / G = Group / W =							
Common Name/Scientific Name	Common name nomenclature.	e followed by italicised scientific name using binomial							
Tree Height		ree, measured in metres and recorded to the nearest half ons up to 10 m and the nearest whole metre for dimensions							
Stem diameter		em measured in millimetres at 1.5 metres above ground level em tree measured in accordance with BS5837)							
Canopy Spread	Extent of the tree canopy spread, measured in metres at the four compass points (north, east, south and west) and recorded to the nearest half metre for dimensions up to 10 m and the nearest whole metre for dimensions over 10 m.								
Height of First Significant Branch and Direction	The height of t (north, south-e	he first significant branch in metres and its direction of growth ast or west).							
Canopy Clearance Height	to the nearest l	he lowest part of the crown, measured in metres and recorded nalf metre for dimensions up to 10 m and the nearest whole nsions over 10 m.							
Life Stage	Classification g	iven in relation to the life expectancy of the specific species.							
	Young (Y)	A recently planted or self seeded tree with a stem diameter less than 150mm at 1.5m height.							
	Semi Mature (SM)	Tree in the first third of its normal life expectancy for the species (significant potential for future growth in size).							
	Early Mature (EM)	Tree in the second third of its normal life expectancy for the species (some potential for future growth in size).							







Term	Definition							
	Mature(M)	Tree in the final third of its normal life expectancy for the spe-cies (having typically reached its approximate ultimate size).						
	Ancient (A)	Tree that has survived beyond the typical age range for the species and may have acquired rare qualities such as a large stem diameter, hollowing and significant habitat features.						
Physiological	The condition o	of the canopy and photosynthetic parts of the tree.						
Condition		ealth and vitality with sufficient leaf cover and size the species and age. Tree will likely have minor deadwood.						
	branches, disco	ving some signs of stress such as minor thinning, dieback of blouration of leaves, smaller leaves than usual or typical leafes. Tree may recover in time or with remedial work.						
		wing strong signs physiological stress. This can include n dieback, stag heading, sparse foliage and pest infestation. to recover.						
Structural Condition	The biomechar	nical integrity of the stem and woody parts of the tree.						
		w minor defects of little significance or easily rectifiable such suppressed branches. No adverse risk of failure.						
	dead-wood, ba damaged limbs	of one or more moderate defects. This could include large rk included unions, weak branch attachments, storm s, cavities and decay. Work may self-optimise over time or equired to remedy the defect.						
		ith major structural defects such as advanced decay or root as to the tree can be expected.						
Estimated remaining contribution	1	on the condition and species of the tree. <10 years, 10-20 ars and 40+ years.						
Root Protection Area (RPA)	An area which defines the theoretical minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure is treated as a priority. Measured as the radius of a circle in metres, and total area in square metres.							
Root Protection Area radius	In metres, the r Protection Area	adius of the circle around the tree defining the Root a.						
BS <sub>5</sub> 8 <sub>3</sub> 7:2012 Quality	As per Table 1 in	n BS5837:2012.						
Category	Category A = tr	ees of high quality with at least 40 years life expectancy						







Term	Definition
	Category B = trees of moderate quality with at least 20 years life expectancy
	Category C = trees of low quality with at least 10 years life expectancy OR young trees with a stem diameter of less than 150mm at 1.5 height.
	Category U = trees of very low quality with less than 10 years life expectancy.
	1 = Mainly arboricultural qualities
	2 = Mainly landscape qualities
	3 = Mainly cultural values including conservation
Observations	General observations, particularly of structural and/or physiological condition. (E.g., the presence of any decay and physical defect).
Emboldened dimensions	Dimension estimated due to tree(s) not being accessible and preventing accurate measuring.
N/A	Not Applicable







# Appendix 3. Site Photography

Photograph 1. Trees subject to TPO 259









Photograph 2. To8o oak



Photograph 3. Southern edge of ancient woodland W1







# Photograph 4. Category A oak To12









Photograph 5. To21 oak with raptor box for removal



Photograph 6. To15 ash, To16 sycamore, To17 Sycamore (left to right) and To18 sycamore in Go4 in the background









Photograph 7. To23 and To24 oak (left to right)



Photograph 8. To<sub>39</sub> oak to have earthworks for a drainage basin within its RPA









## Photograph 9. To142 ash (veteran)



Photograph 10. To99 ash (veteran) and G<sub>3</sub>1 in background









Photograph 11. Dunnington Lane Category C trees



Photograph 12. Eske Lane with T104 and T105 ash and Lombardy Poplar in background

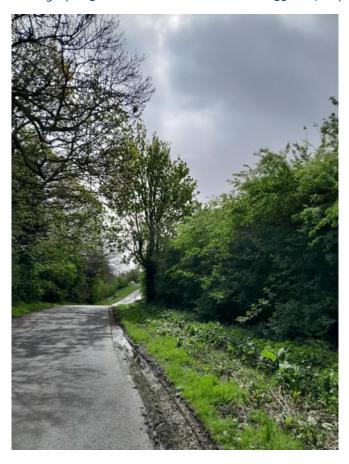








Photograph 13. Unnamed Road north of A1035 – T178 sycamore to right







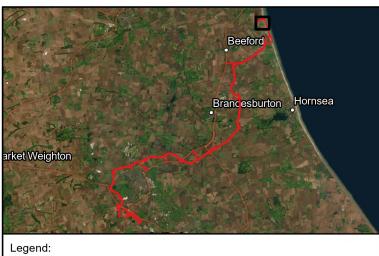


# **Appendix 4. Tree Constraints Plans**









9							
	Ons	shore Devel	opment Area	Canopy Spread			
$\mathbb{Z}$	☑ Vet	eran Tree B	uffer	Category A tree	e (high	ı quali	ty)
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Ste	m Po	sitions		Category C tre	e (low	qualit	y)
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0		egory B tree ality)	e (moderate	quality)			
0	Cat	egory C tree	e (low quality)				
۰		egory U tree lity)	e (very low				
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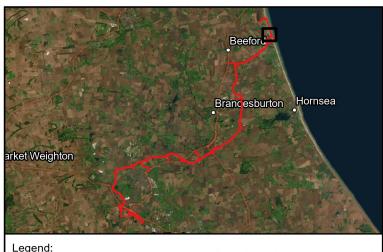
Tree Constraints Plan Sheet 1 of 27

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Tree Constraints Plan Sheet 2 of 27

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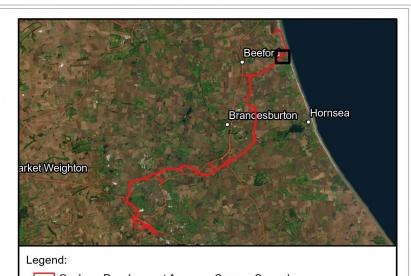
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Dogger Bank South Offshore Wind Farms Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment









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Sheet 3 of 27

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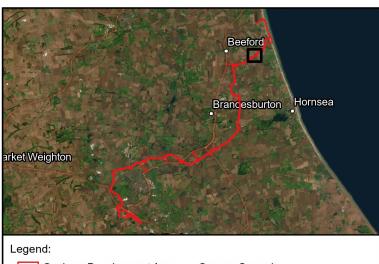
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Offshore Wind Farms Report:

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### Onshore Development Area Canopy Spread Category A tree (high quality) Veteran Tree Buffer Category B tree (moderate quality) Root Protection Areas Stem Positions Category C tree (low quality) Category A tree (high quality) Category U tree (very low quality) Category B tree (moderate quality) Category C tree (low quality) Category U tree (very low quality) Notes: All tree locations have been plotted using aerial imagery only, hence the positions of constraints are accurate to approximately +/- 3 metres. Locations of any individual trees within tree groups are indicative only. Tree reference numbers marked with an asterix symbol (e.g. G25\*) are protected by Tree Preservation Order No. 259 at the Former Broadgates Please refer to the Tree Survey Schedule for full British Standard 5837:2012 tree survey data. Tree constraints are reflective of tree surveys undertaken between April 2024 – July 2024. S2 P01 1/8/2024 Suitable for Information BH AL SUI REV DATE DESCRIPTION DRW CHK APR Title:

Tree Constraints Plan Sheet 4 of 27

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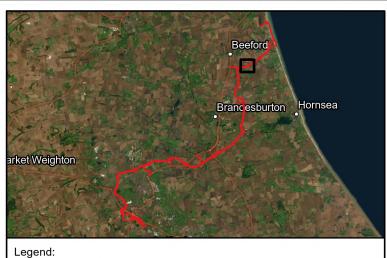
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Dogger Bank South Offshore Wind Farms Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment









### Onshore Development Area Canopy Spread Category A tree (high quality) Veteran Tree Buffer Category B tree (moderate quality) Root Protection Areas Stem Positions Category C tree (low quality) Category U tree (very low quality) Category A tree (high quality) Category B tree (moderate quality) Category C tree (low quality) Category U tree (very low quality) Notes: All tree locations have been plotted using aerial imagery only, hence the positions of constraints are accurate to approximately +/- 3 metres. Locations of any individual trees within tree groups are indicative only. Tree reference numbers marked with an asterix symbol (e.g. G25\*) are protected by Tree Preservation Order No. 259 at the Former Broadgates Please refer to the Tree Survey Schedule for full British Standard 5837:2012 tree survey data. Tree constraints are reflective of tree surveys undertaken between April 2024 - July 2024. S2 P01 1/8/2024 Suitable for Information BH AL SUI REV DATE DESCRIPTION DRW CHK APR Title:

Tree Constraints Plan Sheet 5 of 27

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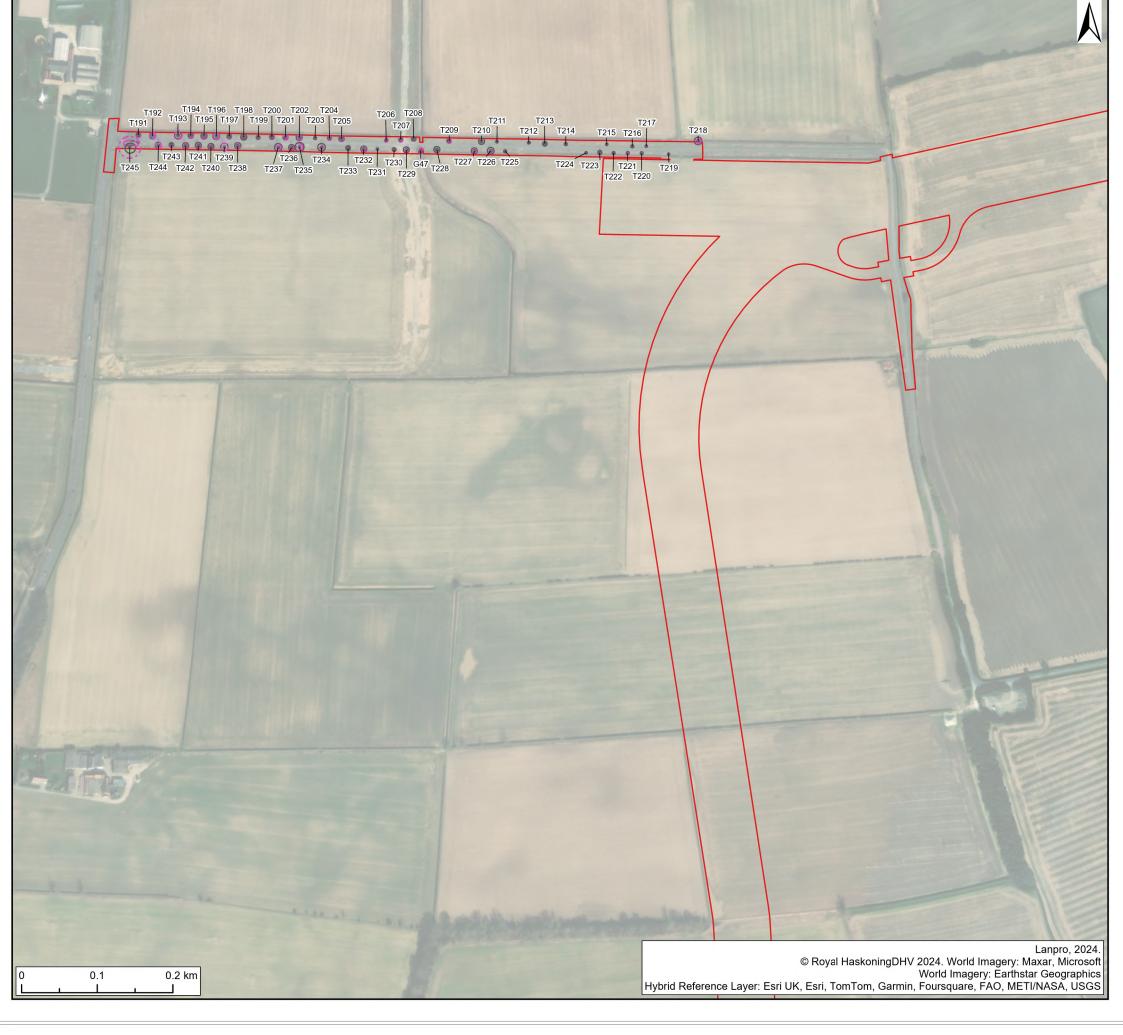
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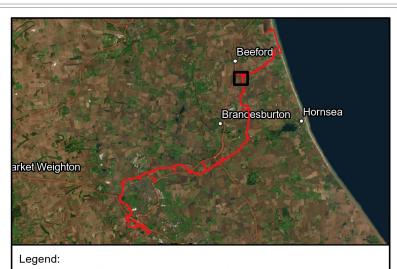
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Dogger Bank South Offshore Wind Farms Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment









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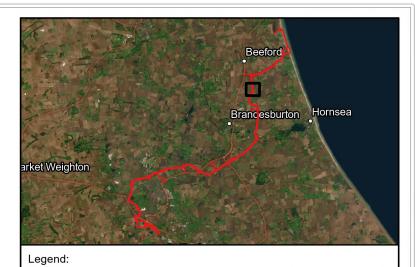
Tree Constraints Plan Sheet 6 of 27

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### Legend: Onshore Development Area Canopy Spread Category A tree (high quality) Veteran Tree Buffer Category B tree (moderate quality) Root Protection Areas Stem Positions Category C tree (low quality) Category A tree (high quality) Category U tree (very low quality) Category B tree (moderate quality) Category C tree (low quality) Category U tree (very low quality) Notes: All tree locations have been plotted using aerial imagery only, hence the positions of constraints are accurate to approximately +/- 3 metres. Locations of any individual trees within tree groups are indicative only. Tree reference numbers marked with an asterix symbol (e.g. G25\*) are protected by Tree Preservation Order No. 259 at the Former Broadgates Please refer to the Tree Survey Schedule for full British Standard

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5837:2012 tree survey data.

2024 – July 2024.

Tree Constraints Plan Sheet 8 of 27

Tree constraints are reflective of tree surveys undertaken between April

Figure: <b>1-27</b>	Drawing No: PC23	40-LAN-ON-ZZ-DR-Z-0001			
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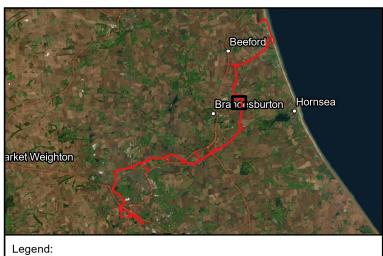
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Sheet 9 of 27

Drawing No: PC2340-LAN-ON-ZZ-DR-Z-0001 Figure: 1-27 Co-ordinate system:
British National Grid Page Size: A3

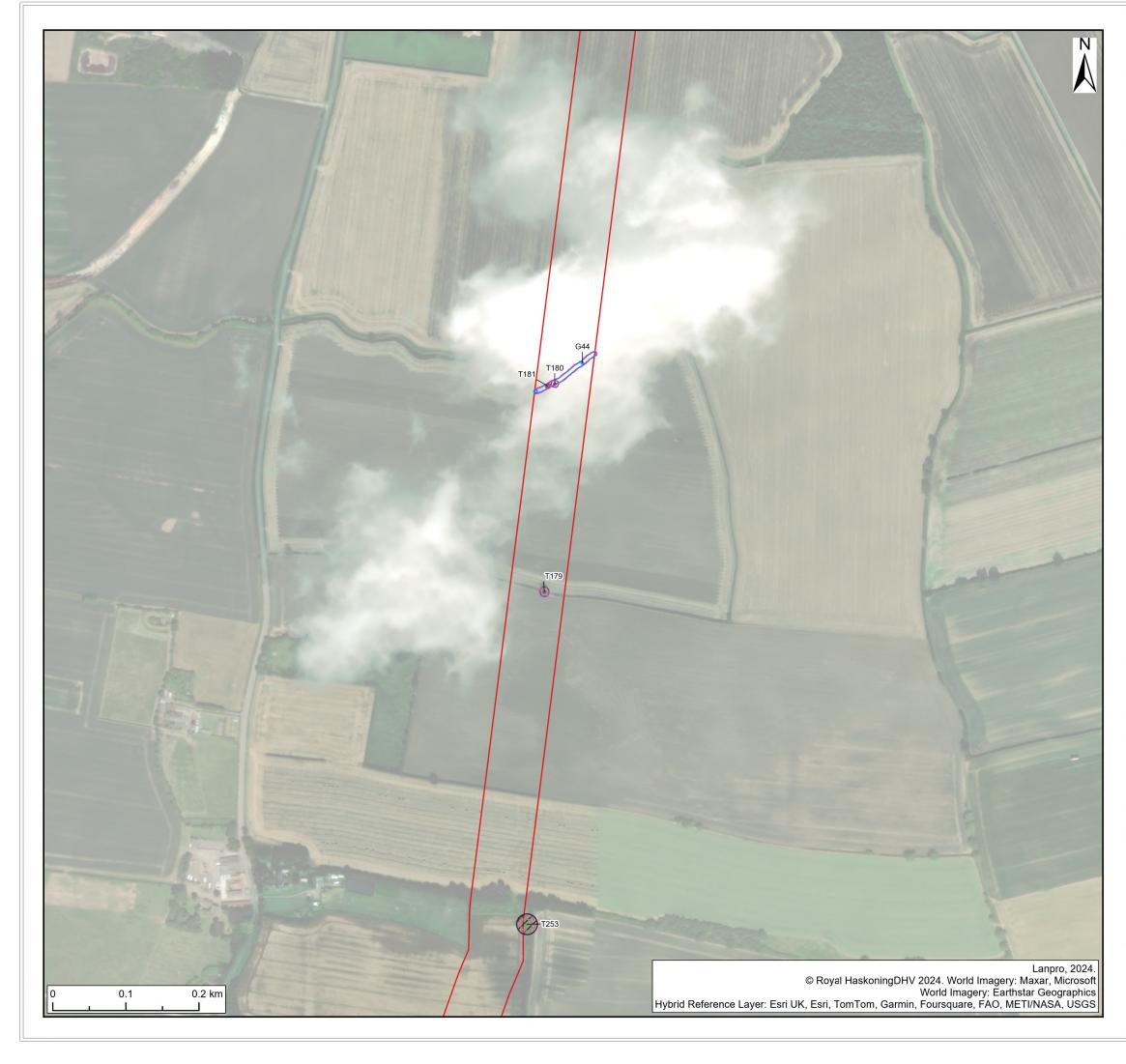
Dogger Bank South Offshore Wind Farms

Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment

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Canopy Spread

Category A tree (high quality)

Onshore Development Area

Veteran Tree Buffer

### Category B tree (moderate quality) Root Protection Areas Stem Positions Category C tree (low quality) Category A tree (high quality) Category U tree (very low quality) Category B tree (moderate quality) Category C tree (low quality) Category U tree (very low quality) Notes: All tree locations have been plotted using aerial imagery only, hence the positions of constraints are accurate to approximately +/- 3 metres. Locations of any individual trees within tree groups are indicative only. Tree reference numbers marked with an asterix symbol (e.g. G25\*) are protected by Tree Preservation Order No. 259 at the Former Broadgates Please refer to the Tree Survey Schedule for full British Standard 5837:2012 tree survey data. Tree constraints are reflective of tree surveys undertaken between April 2024 – July 2024. S2 P01 1/8/2024 Suitable for Information BH AL SUI REV DATE DESCRIPTION DRW CHK APR Title: Tree Constraints Plan

Figure: 1-27

Sheet 10 of 27

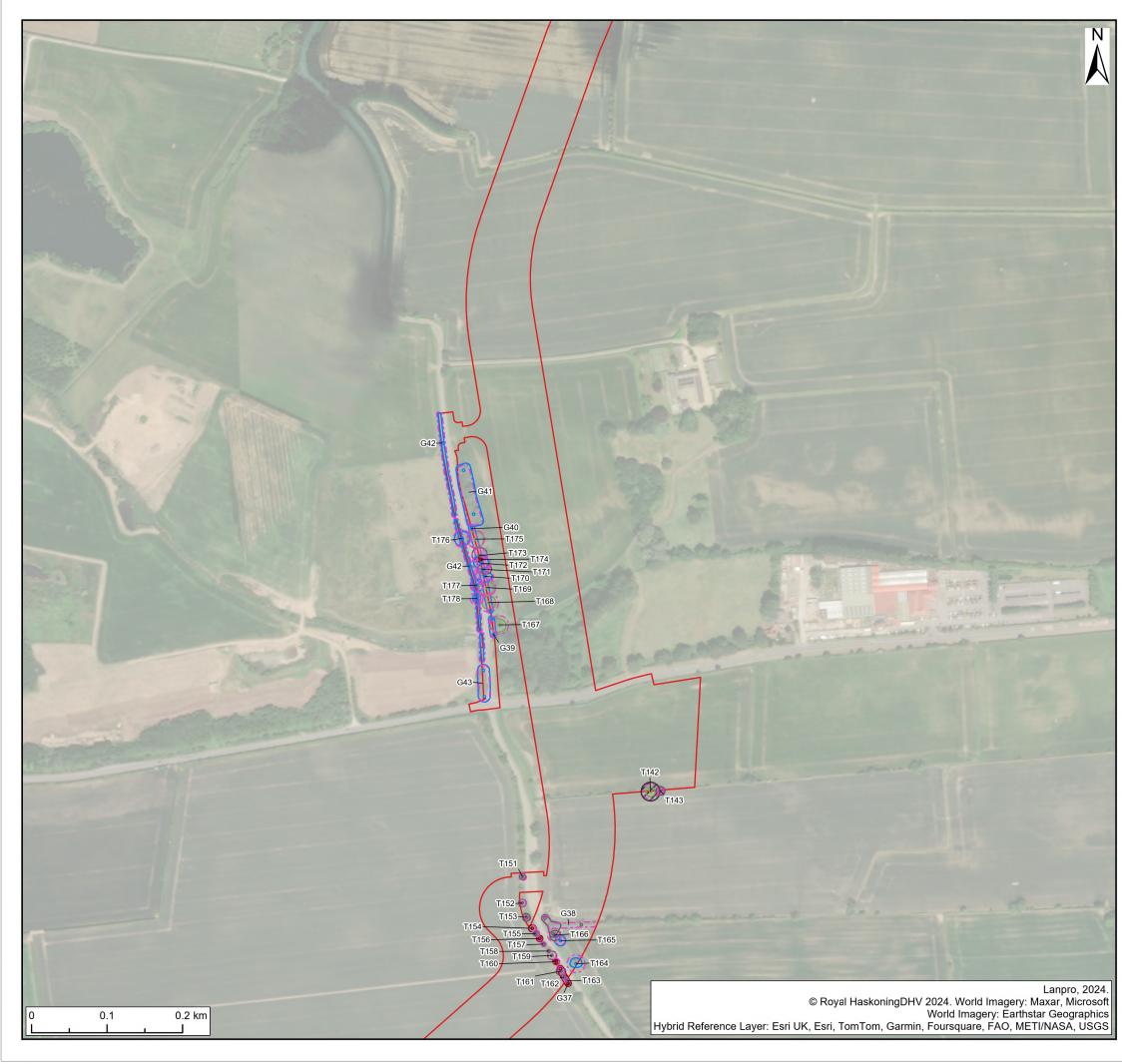
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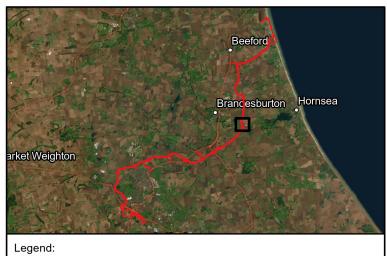
Dogger Bank South Offshore Wind Farms

Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment









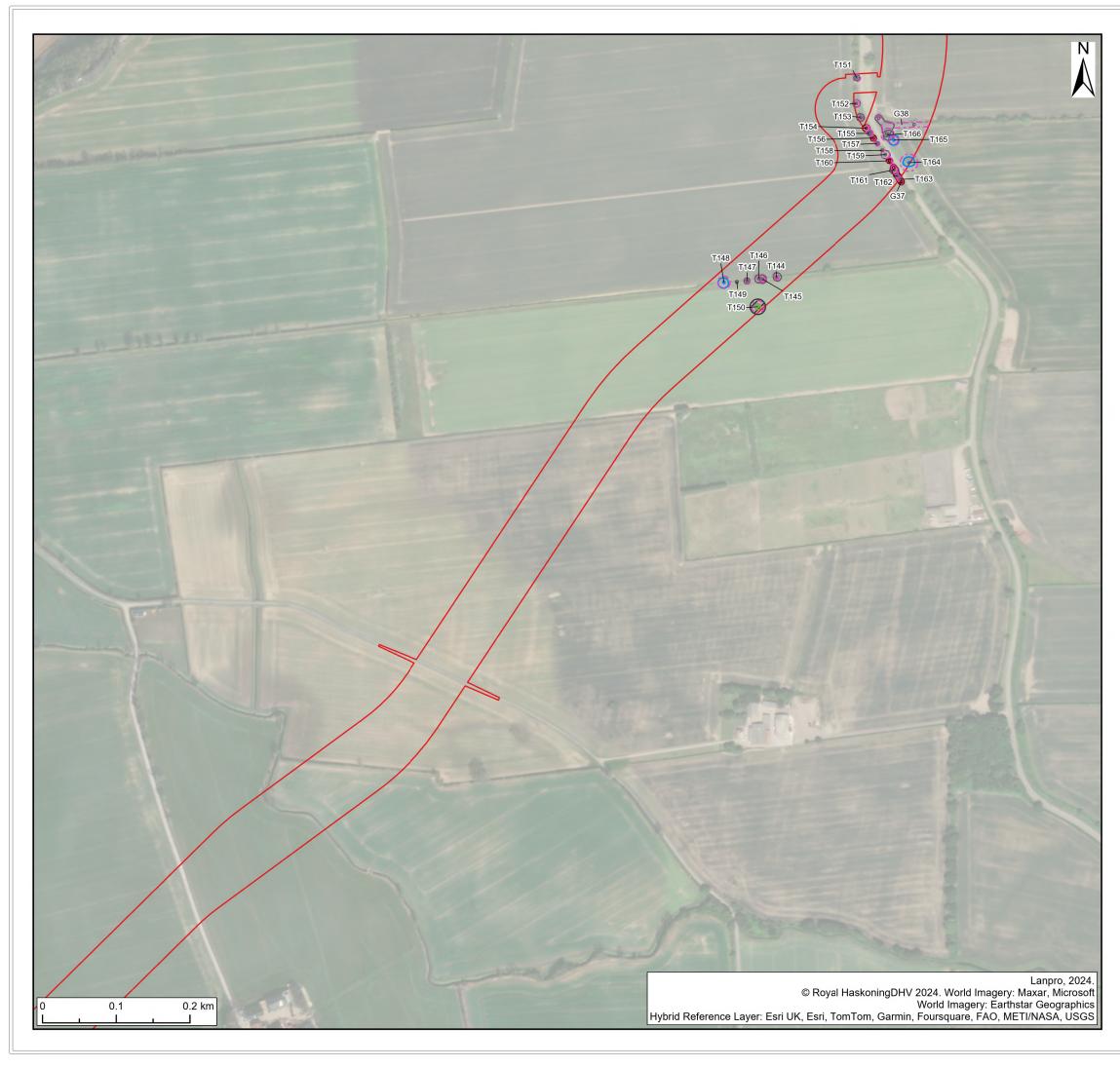
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Tree Constraints Plan Sheet 11 of 27

Figure: 1-27	Drawing No: PC2340-LAN-ON-ZZ-DR-Z-0001				
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Figure: 1-27

Sheet 12 of 27

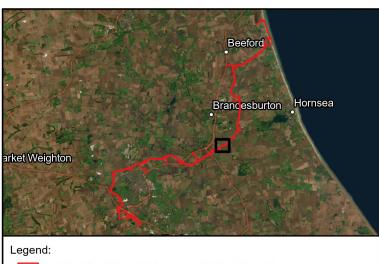
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British National Grid Page Size: A3 1:5,000 Report:

Dogger Bank South Offshore Wind Farms Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment









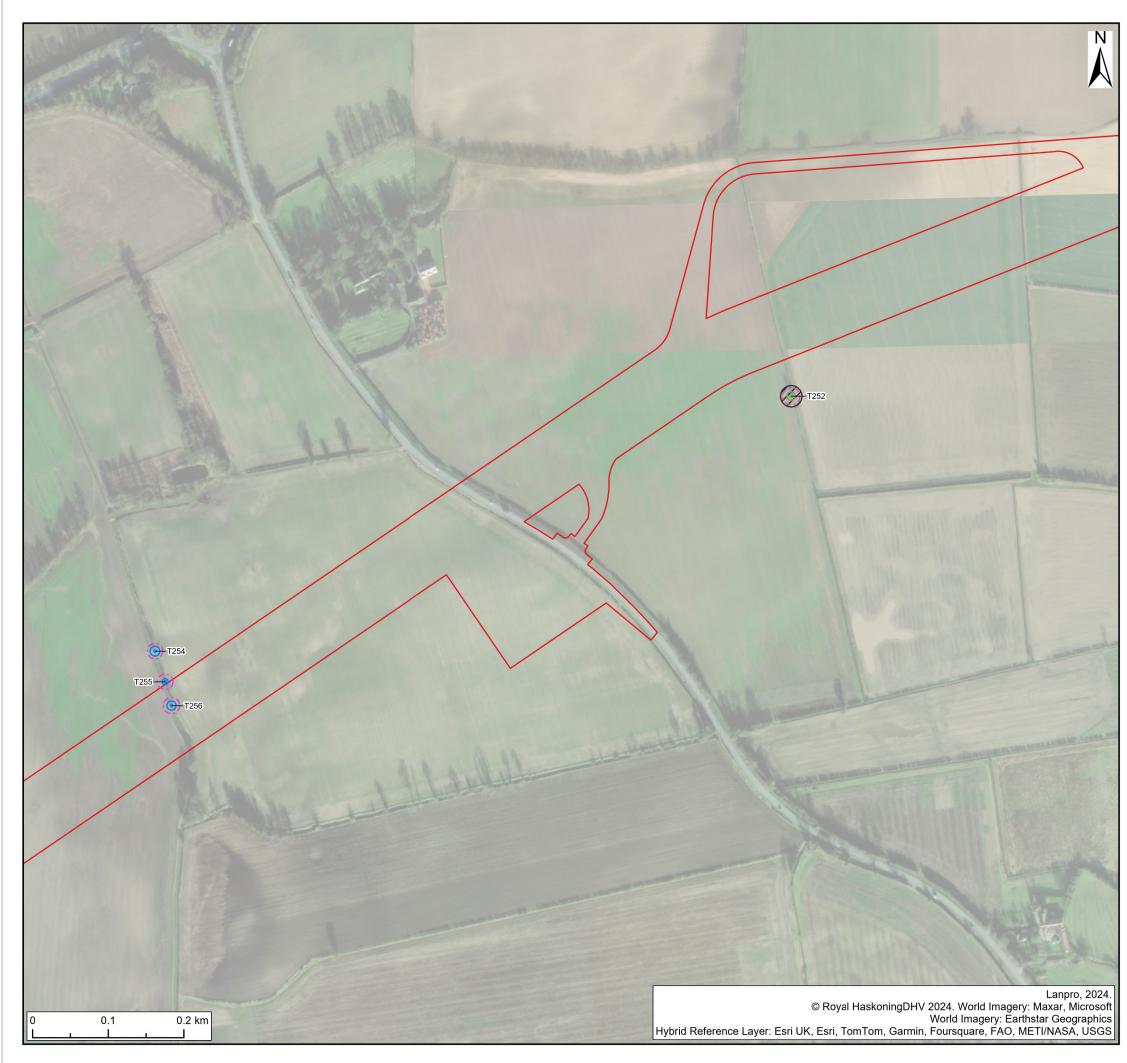
	Ons	shore Devel	opment Area	Canopy Spread			
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Ē.	Roc	ot Protection	Areas	Category B trequality)	e (mod	derate	
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Sheet 13 of 27

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	Bank South Wind Farms	Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment			









### Onshore Development Area Canopy Spread Category A tree (high quality) Veteran Tree Buffer Category B tree (moderate quality) Root Protection Areas Stem Positions Category C tree (low quality) Category A tree (high quality) Category U tree (very low quality) Category B tree (moderate quality) Category C tree (low quality) Category U tree (very low quality) Notes: All tree locations have been plotted using aerial imagery only, hence the positions of constraints are accurate to approximately +/- 3 metres. Locations of any individual trees within tree groups are indicative only. Tree reference numbers marked with an asterix symbol (e.g. G25\*) are protected by Tree Preservation Order No. 259 at the Former Broadgates

Tree constraints are reflective of tree surveys undertaken between April

Please refer to the Tree Survey Schedule for full British Standard

5837:2012 tree survey data.

2024 – July 2024.

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Tree Constraints Plan Sheet 14 of 27

Figure: <b>1-27</b>	Drawing No: PC2340-LAN-ON-ZZ-DR-Z-0001				
Co-ordinate syst British N	em: lational Grid	Page Size: A3	Scale: 1:5,000		
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	Bank South Wind Farms	Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment			









# Onshore Development Area Veteran Tree Buffer Root Protection Areas Stem Positions Category A tree (high quality) Category A tree (high quality) Category B tree (moderate quality) Category B tree (moderate quality) Category C tree (low quality) Category C tree (low quality) Category U tree (very low quality)

### Notes:

All tree locations have been plotted using aerial imagery only, hence the positions of constraints are accurate to approximately +/- 3 metres. Locations of any individual trees within tree groups are indicative only.

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Please refer to the Tree Survey Schedule for full British Standard 5837:2012 tree survey data.

Tree constraints are reflective of tree surveys undertaken between April 2024 – July 2024.

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Tree Constraints Plan Sheet 15 of 27

Figure: 1-27 Drawing No: PC2340-LAN-ON-ZZ-DR-Z-0001

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Dogger Bank South
Offshore Wind Farms Report:

Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment









# Category B tree (moderate quality) Stem Positions Category A tree (high quality) Category B tree (moderate quality) Category B tree (wery low quality) Category C tree (low quality)

Category U tree (very low quality)

# Notes:

All tree locations have been plotted using aerial imagery only, hence the positions of constraints are accurate to approximately +/- 3 metres. Locations of any individual trees within tree groups are indicative only.

Tree reference numbers marked with an asterix symbol (e.g. G25\*) are protected by Tree Preservation Order No. 259 at the Former Broadgates Hospital.

Please refer to the Tree Survey Schedule for full British Standard 5837:2012 tree survey data.

Tree constraints are reflective of tree surveys undertaken between April 2024 – July 2024.

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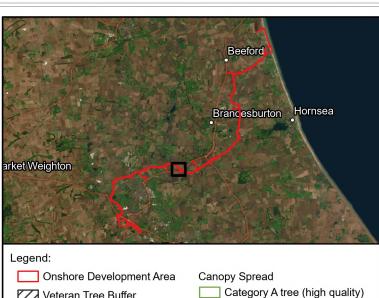
Tree Constraints Plan Sheet 16 of 27

Figure: <b>1-27</b>	Drawing No: PC23	40-LAN-ON-	ZZ-DR-Z-0001
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	Bank South Wind Farms	and Prelim	ural Survey Report inary Arboricultural tt Assessment









# Onshore Development Area Veteran Tree Buffer Category A tree (high quality) Category A tree (high quality) Category A tree (high quality) Category B tree (moderate quality) Category B tree (moderate quality) Category C tree (low quality) Category C tree (low quality) Category U tree (very low quality)

#### Notes

All tree locations have been plotted using aerial imagery only, hence the positions of constraints are accurate to approximately +/- 3 metres. Locations of any individual trees within tree groups are indicative only.

Tree reference numbers marked with an asterix symbol (e.g. G25\*) are protected by Tree Preservation Order No. 259 at the Former Broadgates Hospital.

Please refer to the Tree Survey Schedule for full British Standard 5837:2012 tree survey data.

Tree constraints are reflective of tree surveys undertaken between April 2024 – July 2024.

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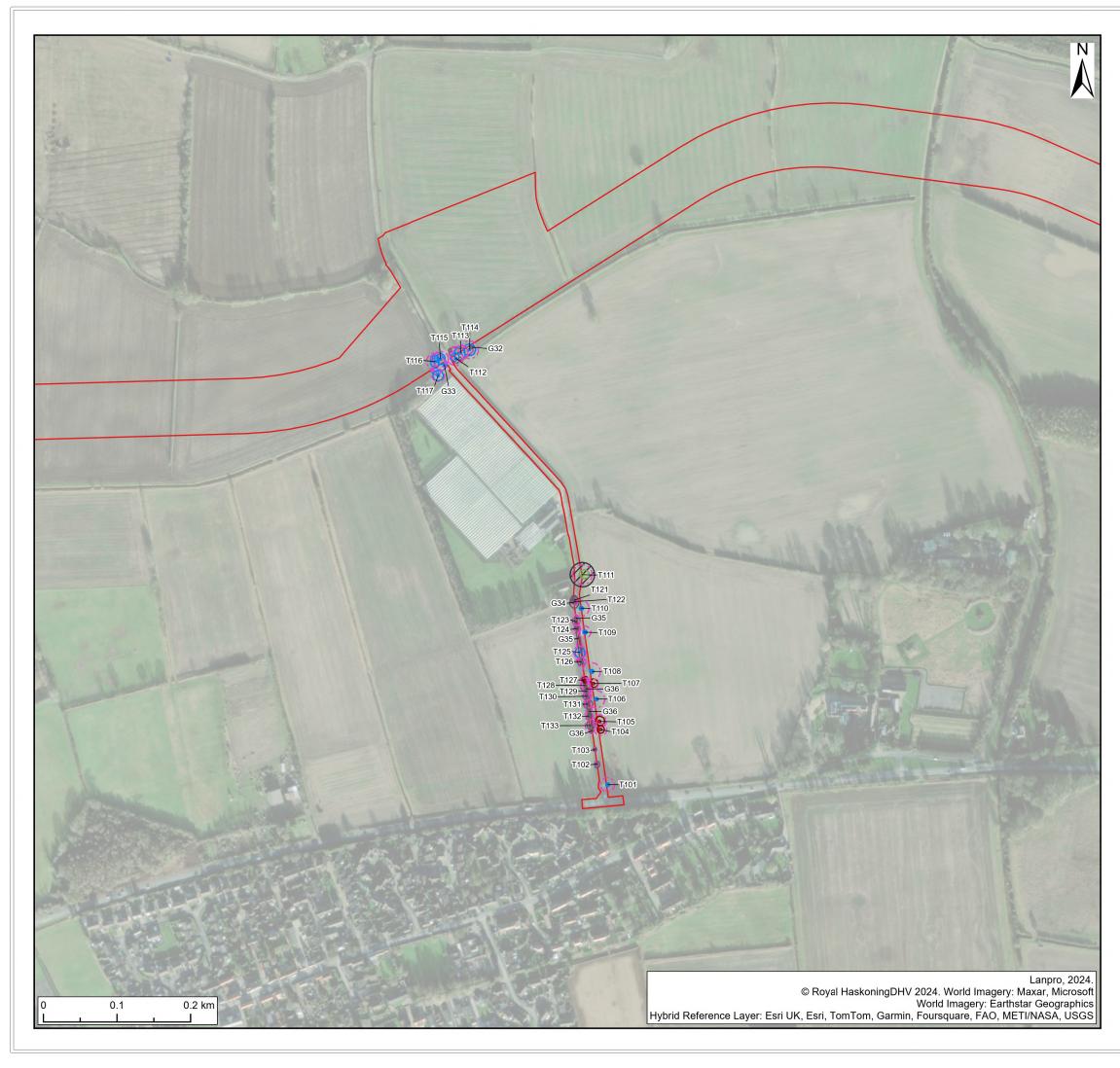
Title

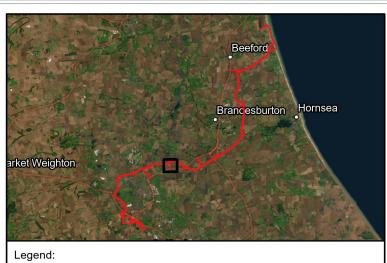
Tree Constraints Plan Sheet 17 of 27

Figure: <b>1-27</b>	Drawing No: PC2340-LAN-ON-ZZ-DR-Z-0001				
Co-ordinate syst British N	em: lational Grid	Page Size: A3	Scale: 1:5,000		
Project:		Report:			
	Bank South Wind Farms	Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment			









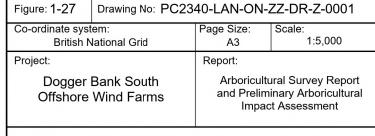
Canopy Spread

Category A tree (high quality)

Onshore Development Area

Veteran Tree Buffer

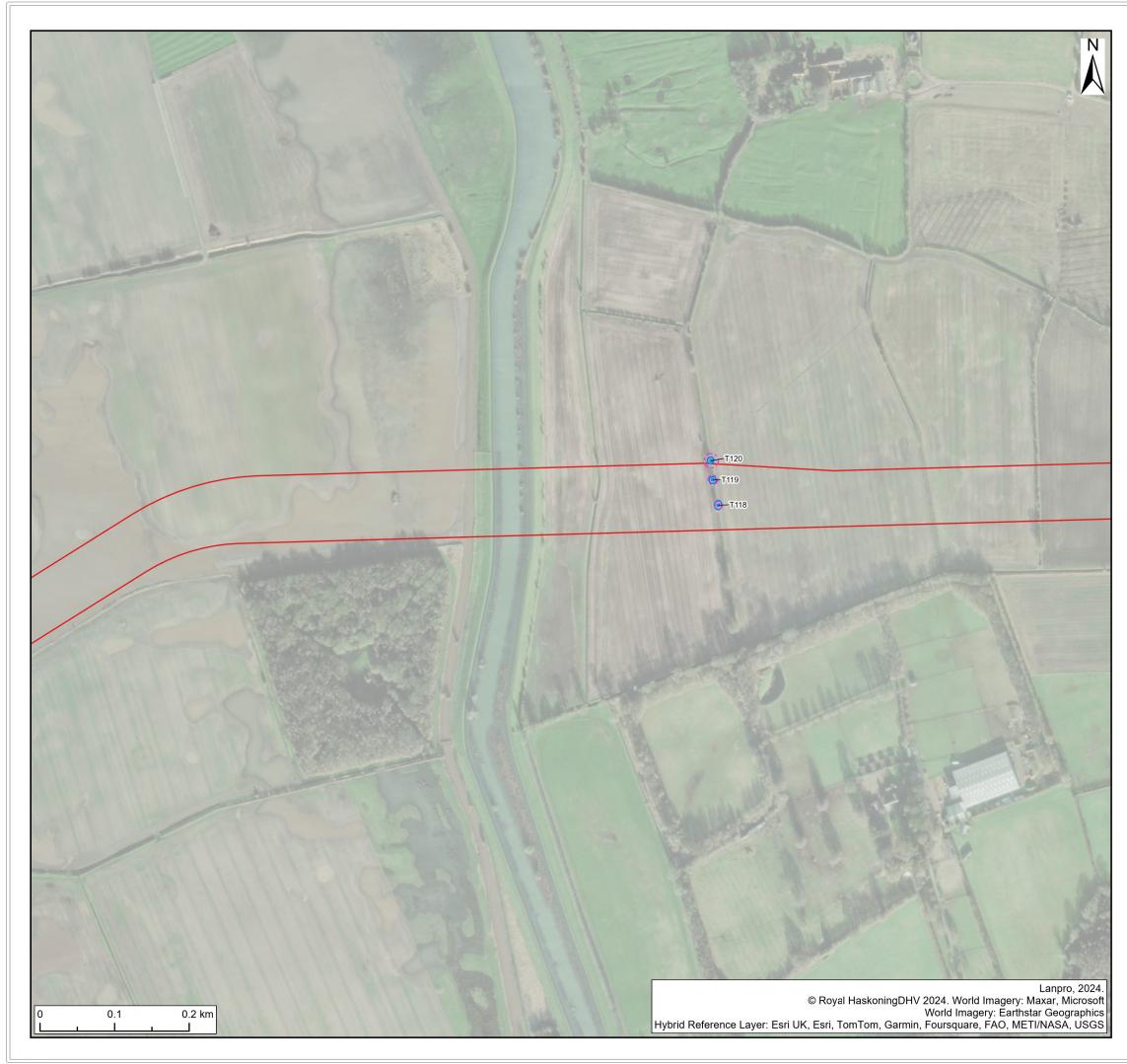
# Category B tree (moderate quality) Root Protection Areas Stem Positions Category C tree (low quality) Category A tree (high quality) Category U tree (very low quality) Category B tree (moderate quality) Category C tree (low quality) Category U tree (very low quality) Notes: All tree locations have been plotted using aerial imagery only, hence the positions of constraints are accurate to approximately +/- 3 metres. Locations of any individual trees within tree groups are indicative only. Tree reference numbers marked with an asterix symbol (e.g. G25\*) are protected by Tree Preservation Order No. 259 at the Former Broadgates Hospital. Please refer to the Tree Survey Schedule for full British Standard 5837:2012 tree survey data. Tree constraints are reflective of tree surveys undertaken between April 2024 - July 2024. S2 P01 1/8/2024 Suitable for Information BH AL SUI REV DATE DESCRIPTION DRW CHK APR Title: Tree Constraints Plan



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# Legend: Onshore Development Area Canopy Spread Category A tree (high quality) Veteran Tree Buffer Category B tree (moderate quality) Root Protection Areas Stem Positions Category C tree (low quality) Category A tree (high quality) Category U tree (very low quality) Category B tree (moderate quality) Category C tree (low quality) Category U tree (very low quality) Notes: All tree locations have been plotted using aerial imagery only, hence the positions of constraints are accurate to approximately +/- 3 metres. Locations of any individual trees within tree groups are indicative only. Tree reference numbers marked with an asterix symbol (e.g. G25\*) are protected by Tree Preservation Order No. 259 at the Former Broadgates Please refer to the Tree Survey Schedule for full British Standard 5837:2012 tree survey data. Tree constraints are reflective of tree surveys undertaken between April 2024 - July 2024. S2 P01 1/8/2024 Suitable for Information BH AL SUI REV DATE DESCRIPTION DRW CHK APR Tree Constraints Plan

Sheet 19 of 27

Figure: 1-27 Drawing No: PC2340-LAN-ON-ZZ-DR-Z-0001

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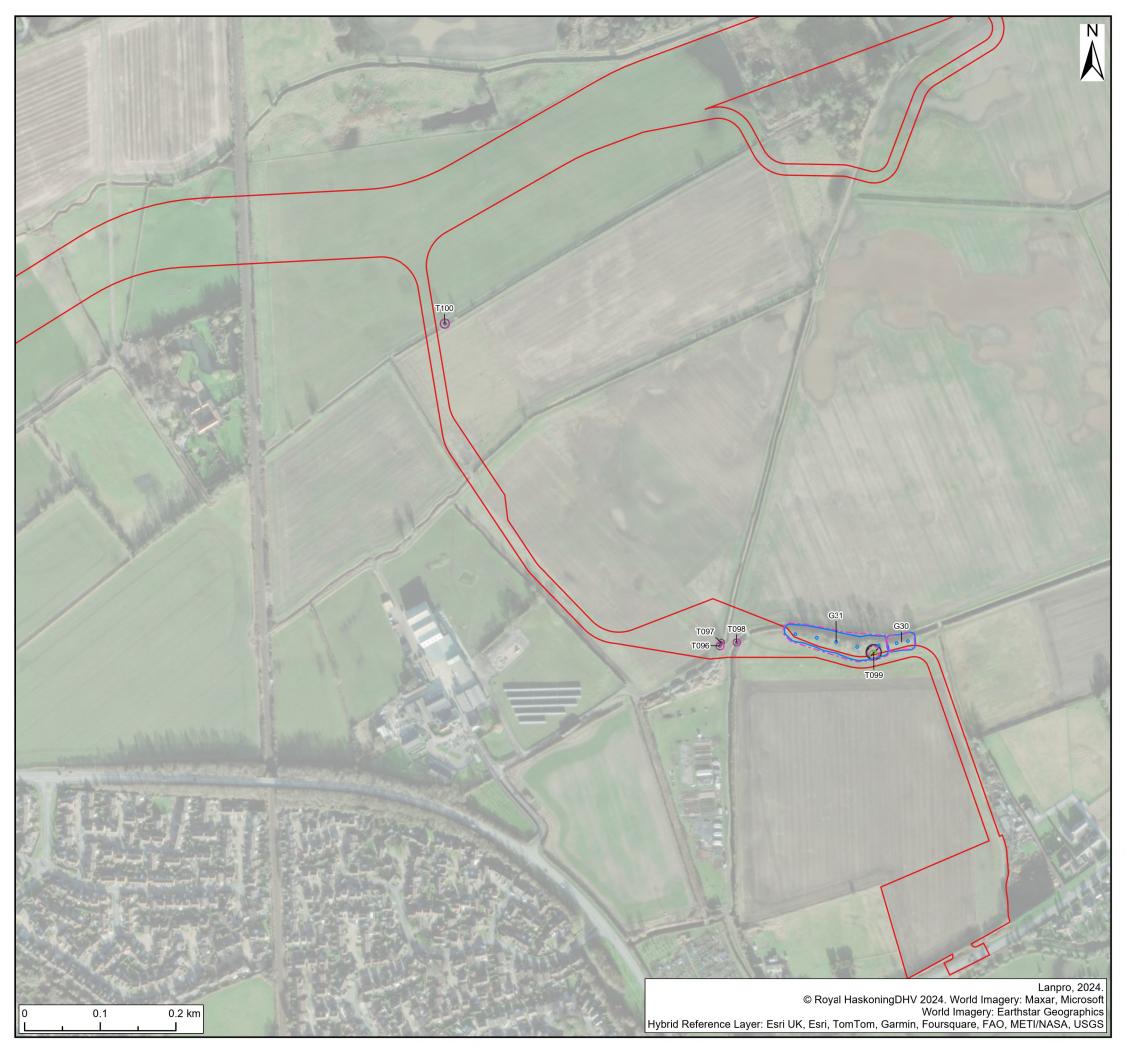
Project:

Dogger Bank South
Offshore Wind Farms

Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment









# Legend: Onshore Development Area Canopy Spread Category A tree (high quality) Veteran Tree Buffer Category B tree (moderate quality) Root Protection Areas Stem Positions Category C tree (low quality) Category A tree (high quality) Category U tree (very low quality) Category B tree (moderate quality) Category C tree (low quality) Category U tree (very low quality) Notes: All tree locations have been plotted using aerial imagery only, hence the positions of constraints are accurate to approximately +/- 3 metres. Locations of any individual trees within tree groups are indicative only. Tree reference numbers marked with an asterix symbol (e.g. G25\*) are protected by Tree Preservation Order No. 259 at the Former Broadgates Please refer to the Tree Survey Schedule for full British Standard 5837:2012 tree survey data. Tree constraints are reflective of tree surveys undertaken between April 2024 – July 2024.

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Tree Constraints Plan Sheet 20 of 27

Figure: <b>1-27</b>	Drawing No: PC2340-LAN-ON-ZZ-DR-Z-0001				
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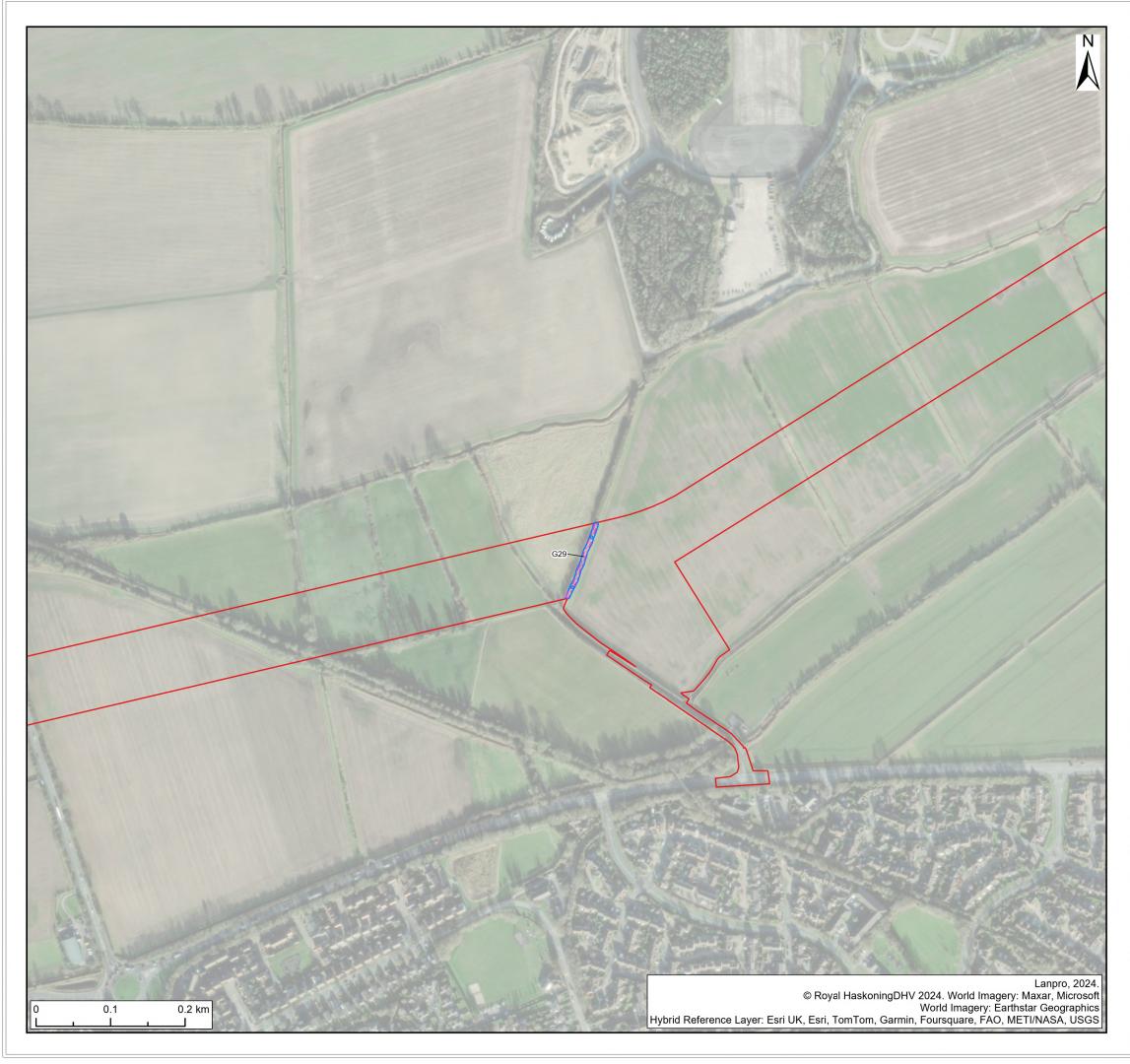


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	Ons	shore Devel	opment Area	Canopy Spread			
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Tree Constraints Plan Sheet 21 of 27

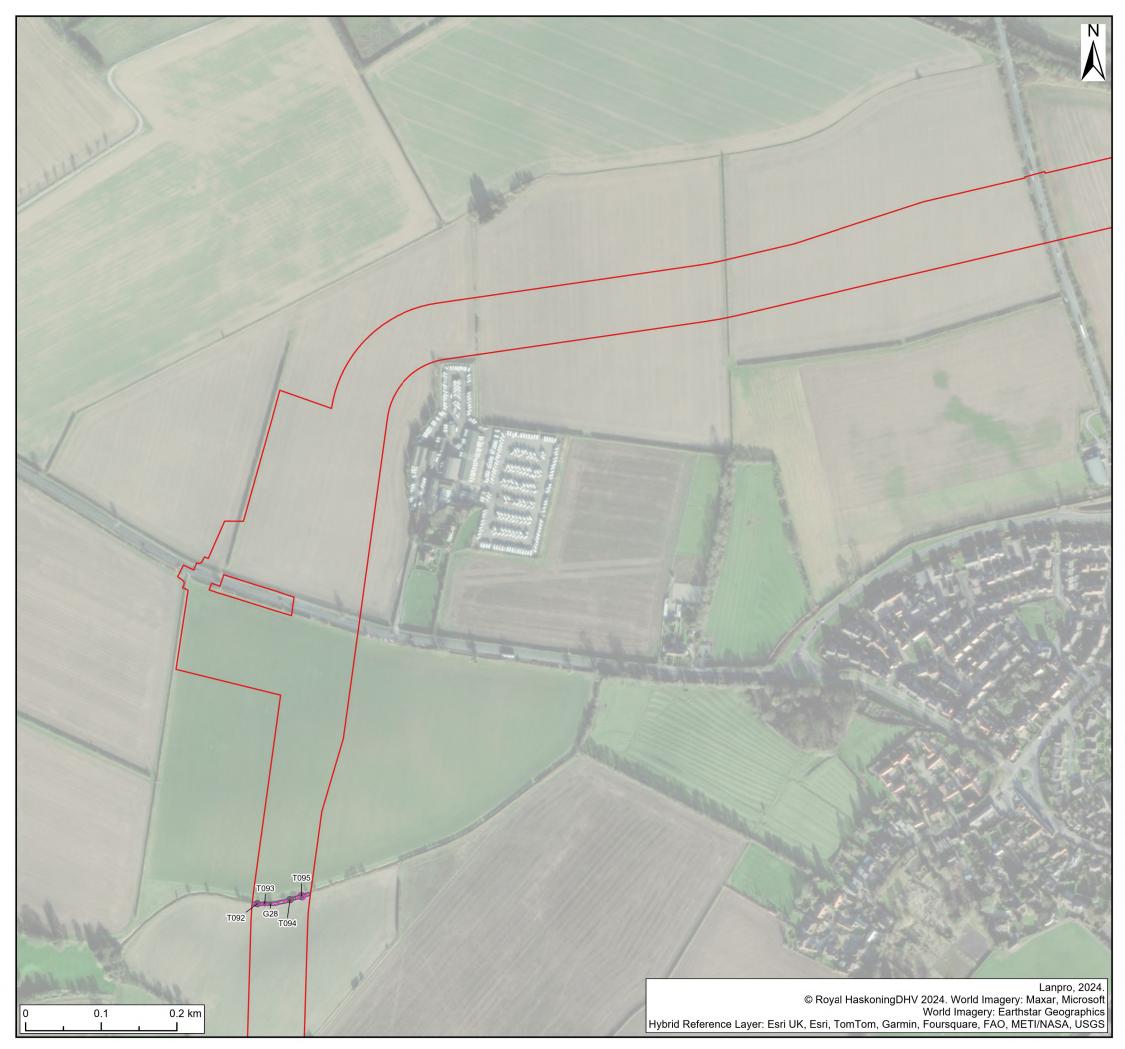
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Co-ordinate system:
British National Grid Page Size: A3 Report:

Dogger Bank South Offshore Wind Farms Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment









# Legend: Onshore Development Area Canopy Spread Category A tree (high quality) Veteran Tree Buffer Category B tree (moderate quality) Root Protection Areas Stem Positions Category C tree (low quality) Category U tree (very low quality) Category A tree (high quality) Category B tree (moderate quality) Category C tree (low quality) Category U tree (very low quality) Notes: All tree locations have been plotted using aerial imagery only, hence the positions of constraints are accurate to approximately +/- 3 metres. Locations of any individual trees within tree groups are indicative only. Tree reference numbers marked with an asterix symbol (e.g. G25\*) are protected by Tree Preservation Order No. 259 at the Former Broadgates Please refer to the Tree Survey Schedule for full British Standard 5837:2012 tree survey data. Tree constraints are reflective of tree surveys undertaken between April 2024 – July 2024. S2 P01 1/8/2024 Suitable for Information BH AL DRW CHK APR SUI REV DATE DESCRIPTION

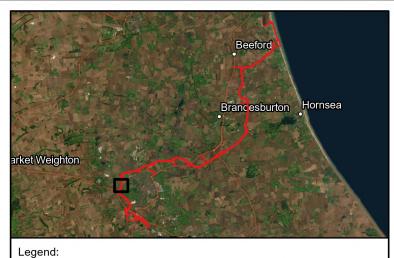
Tree Constraints Plan Sheet 22 of 27

Figure: <b>1-27</b>	Drawing No: PC2340-LAN-ON-ZZ-DR-Z-0001				
Co-ordinate syst British N	em: lational Grid	Page Size: A3	Scale: 1:5,000		
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	Bank South Wind Farms				









# Onshore Development Area Canopy Spread Category A tree (high quality) Veteran Tree Buffer Category B tree (moderate quality) Root Protection Areas Stem Positions Category C tree (low quality) Category U tree (very low quality) Category A tree (high quality) Category B tree (moderate quality) Category C tree (low quality) Category U tree (very low quality) All tree locations have been plotted using aerial imagery only, hence the positions of constraints are accurate to approximately +/- 3 metres. Locations of any individual trees within tree groups are indicative only. Tree reference numbers marked with an asterix symbol (e.g. G25\*) are protected by Tree Preservation Order No. 259 at the Former Broadgates Please refer to the Tree Survey Schedule for full British Standard 5837:2012 tree survey data. Tree constraints are reflective of tree surveys undertaken between April 2024 – July 2024. S2 P01 1/8/2024 Suitable for Information BH AL DRW CHK APR SUI REV DATE DESCRIPTION

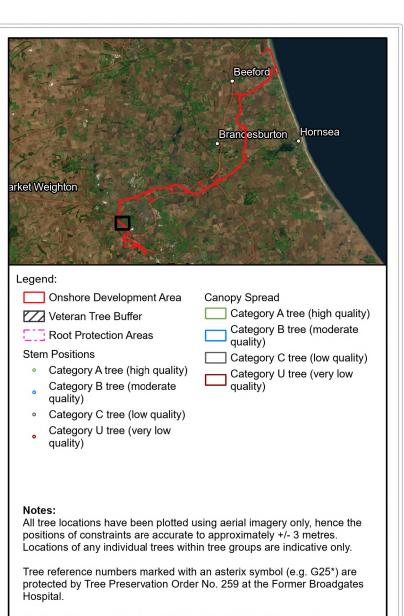
Tree Constraints Plan Sheet 23 of 27

Figure: 1-27	Drawing No: PC23	40-LAN-ON-ZZ-DR-Z-0001		
Co-ordinate syst British N	em: lational Grid	Page Size: A3	Scale: 1:5,000	
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Please refer to the Tree Survey Schedule for full British Standard 5837:2012 tree survey data.

Tree constraints are reflective of tree surveys undertaken between April 2024 – July 2024.

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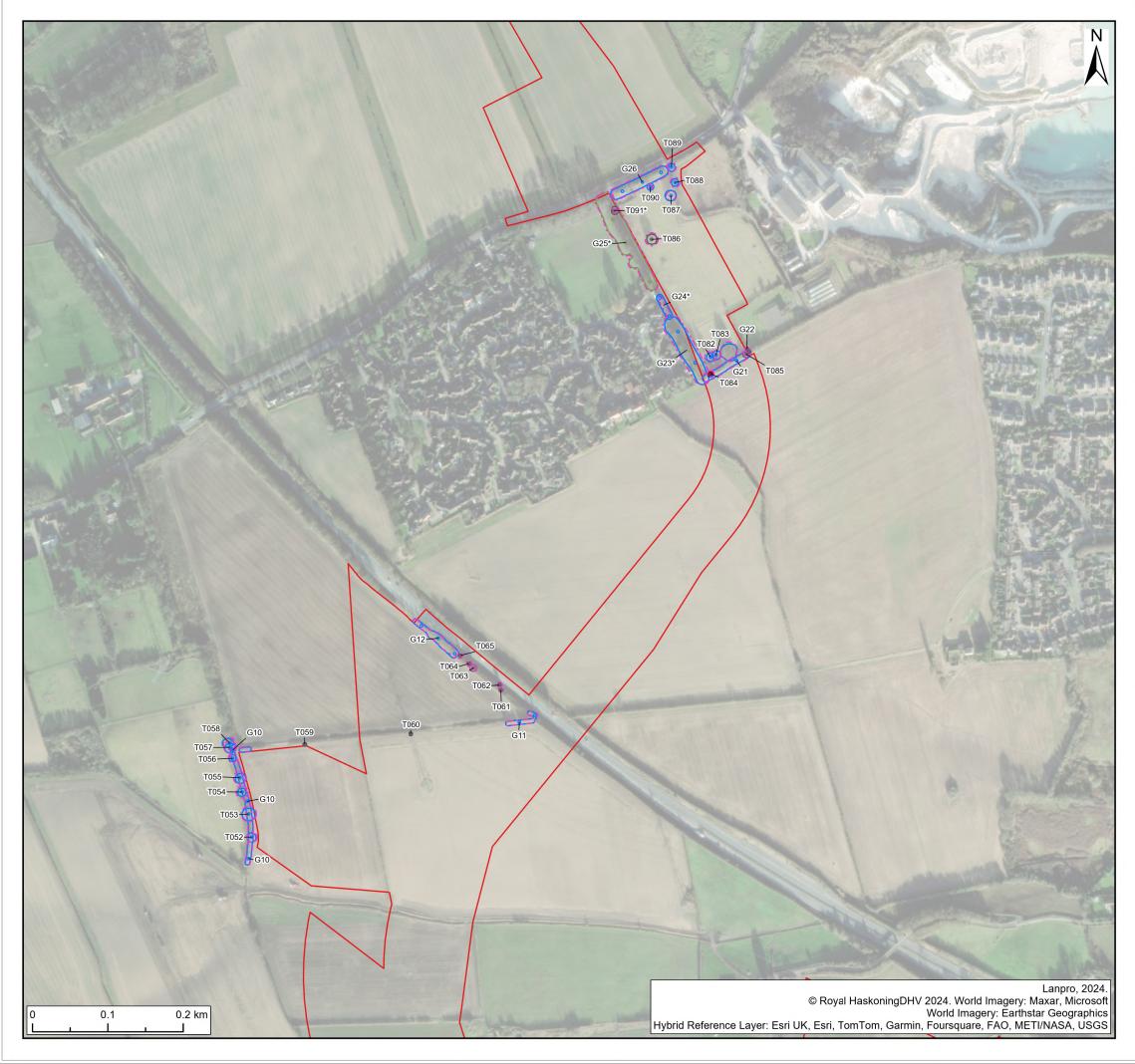
Title

Tree Constraints Plan Sheet 24 of 27

Figure: 1-27 Drawing No: PC2340-LAN-ON-ZZ-DR-Z-0001					
Co-ordinate syst British N	em: lational Grid	Page Size: A3	Scale: 1:5,000		
Project:		Report:			
	Bank South Wind Farms	Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment			









# Onshore Development Area Canopy Spread Category A tree (high quality) Veteran Tree Buffer Category B tree (moderate quality) Root Protection Areas Stem Positions Category C tree (low quality) Category A tree (high quality) Category U tree (very low quality) Category B tree (moderate quality) Category C tree (low quality) Category U tree (very low quality) Notes: All tree locations have been plotted using aerial imagery only, hence the positions of constraints are accurate to approximately +/- 3 metres. Locations of any individual trees within tree groups are indicative only. Tree reference numbers marked with an asterix symbol (e.g. G25\*) are protected by Tree Preservation Order No. 259 at the Former Broadgates Please refer to the Tree Survey Schedule for full British Standard 5837:2012 tree survey data. Tree constraints are reflective of tree surveys undertaken between April 2024 – July 2024. S2 P01 1/8/2024 Suitable for Information BH AL SUI REV DATE DESCRIPTION DRW CHK APR Title:

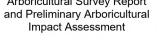
Figure: 1-27

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Tree Constraints Plan

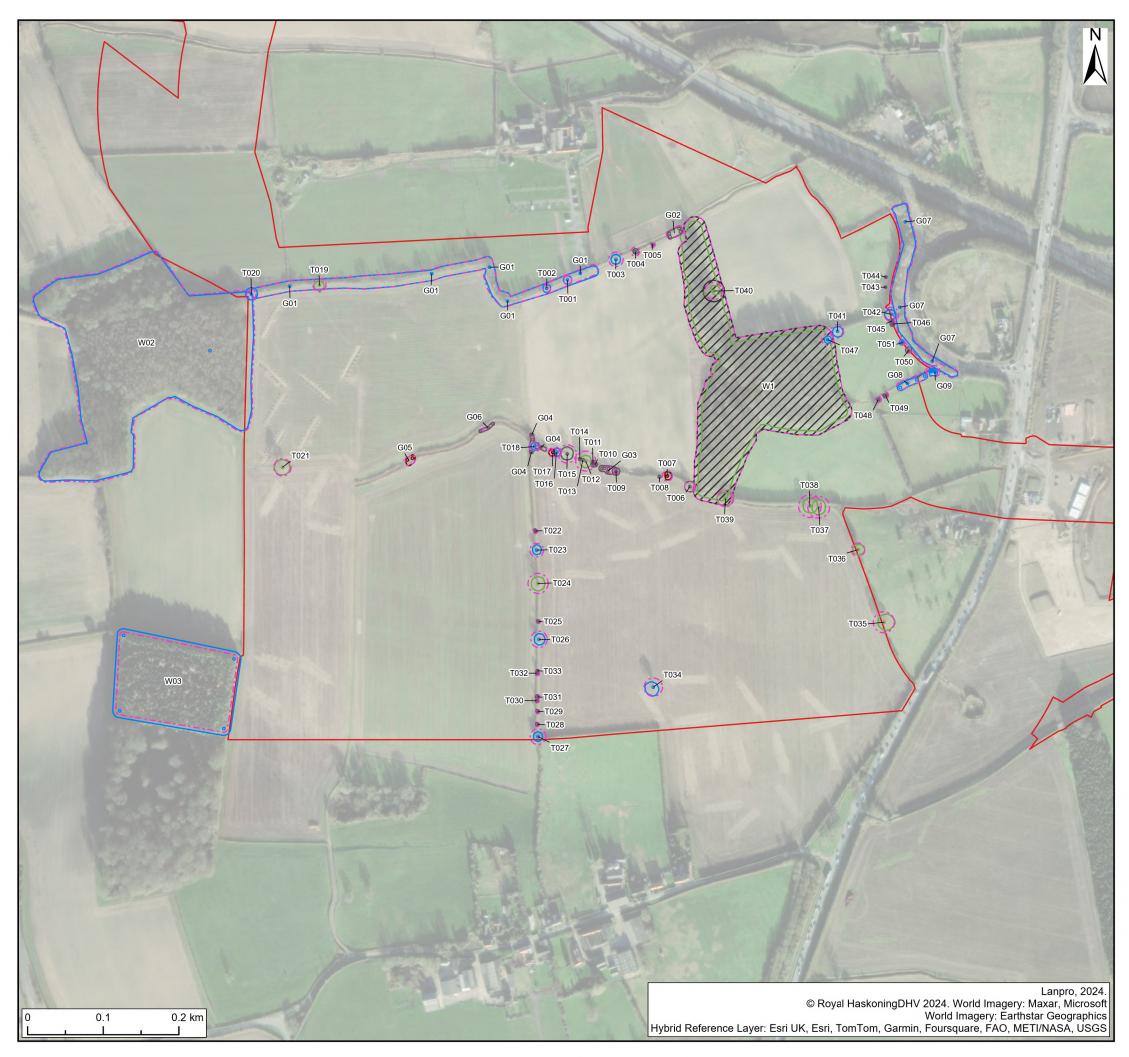
Drawing No: PC2340-LAN-ON-ZZ-DR-Z-0001 Page Size: Co-ordinate system: 1:5,000 **British National Grid** A3 Arboricultural Survey Report Dogger Bank South

Offshore Wind Farms











# Onshore Development Area Veteran Tree Buffer Category A tree (high quality) Category B tree (moderate quality) Category B tree (moderate quality) Category C tree (low quality)

#### Notes:

Category U tree (very low quality)

All tree locations have been plotted using aerial imagery only, hence the positions of constraints are accurate to approximately +/- 3 metres. Locations of any individual trees within tree groups are indicative only.

Tree reference numbers marked with an asterix symbol (e.g. G25\*) are protected by Tree Preservation Order No. 259 at the Former Broadgates Hospital.

Please refer to the Tree Survey Schedule for full British Standard 5837:2012 tree survey data.

Tree constraints are reflective of tree surveys undertaken between April 2024 – July 2024.

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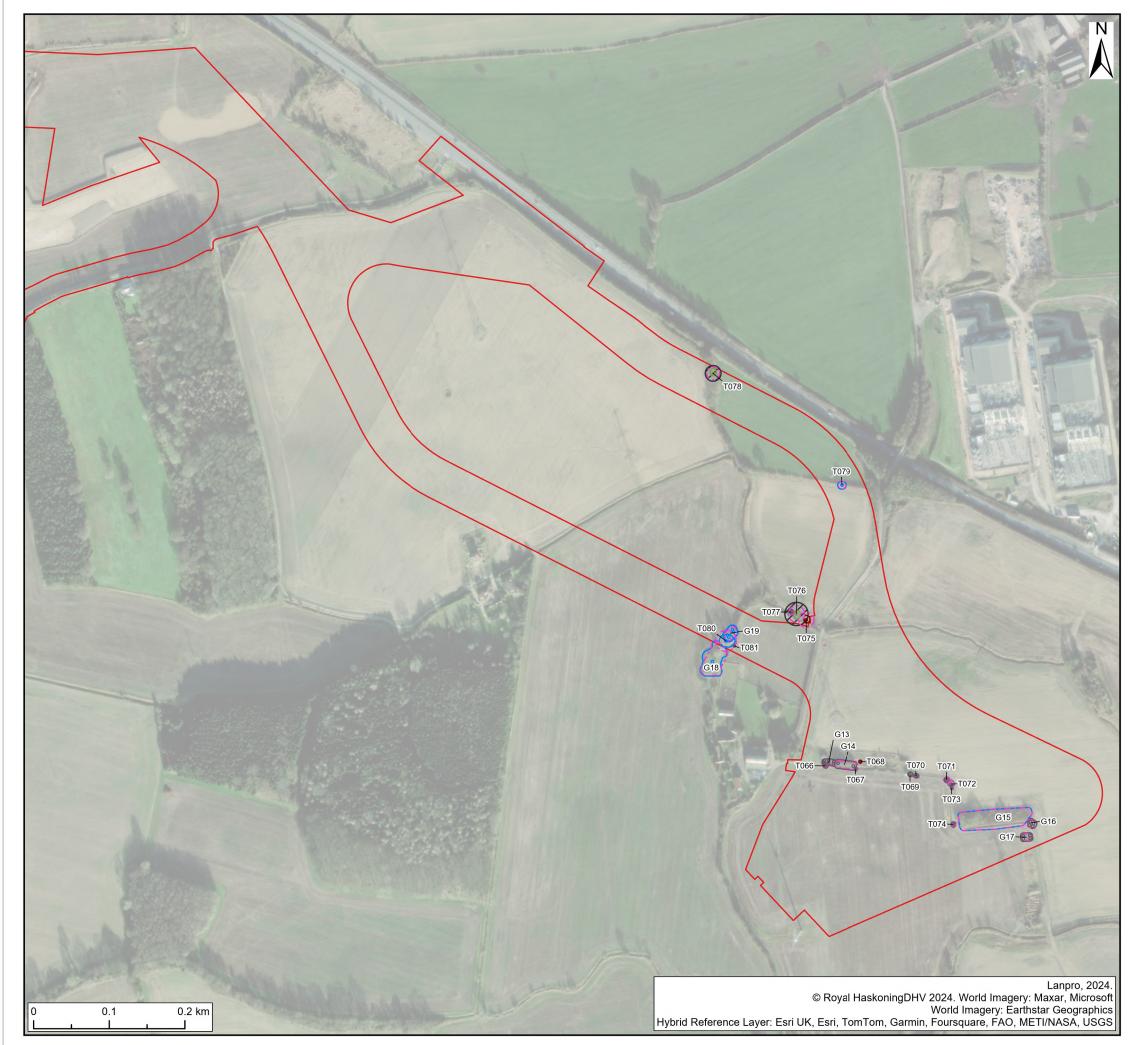
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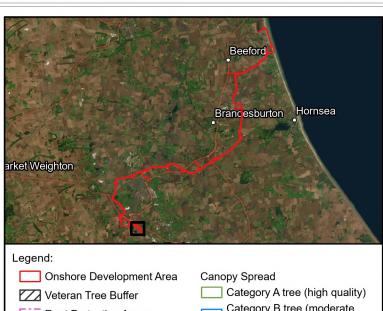
Tree Constraints Plan Sheet 26 of 27

Figure: 1-27 Drawing No: PC2340-LAN-ON-ZZ-DR-Z-0001				
Co-ordinate syst British N	em: lational Grid	Page Size: A3	Scale: 1:5,000	
Project:  Dogger Bank South Offshore Wind Farms		and Prelim	ural Survey Report inary Arboricultural ot Assessment	









# Legend: Onshore Development Area Canopy Spread Category A tree (high quality) Category B tree (moderate quality) Category A tree (high quality) Category B tree (moderate quality) Category B tree (moderate quality)

#### Notes:

quality)

Category C tree (low quality)Category U tree (very low

All tree locations have been plotted using aerial imagery only, hence the positions of constraints are accurate to approximately +/- 3 metres. Locations of any individual trees within tree groups are indicative only.

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Tree Constraints Plan Sheet 27 of 27

Figure: <b>1-27</b>	Drawing No: PC23	40-LAN-ON-ZZ-DR-Z-0001			
Co-ordinate syst British N	em: lational Grid	Page Size: A3	Scale: 1:5,000		
Project:		Report:			
	Bank South Wind Farms	Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment			



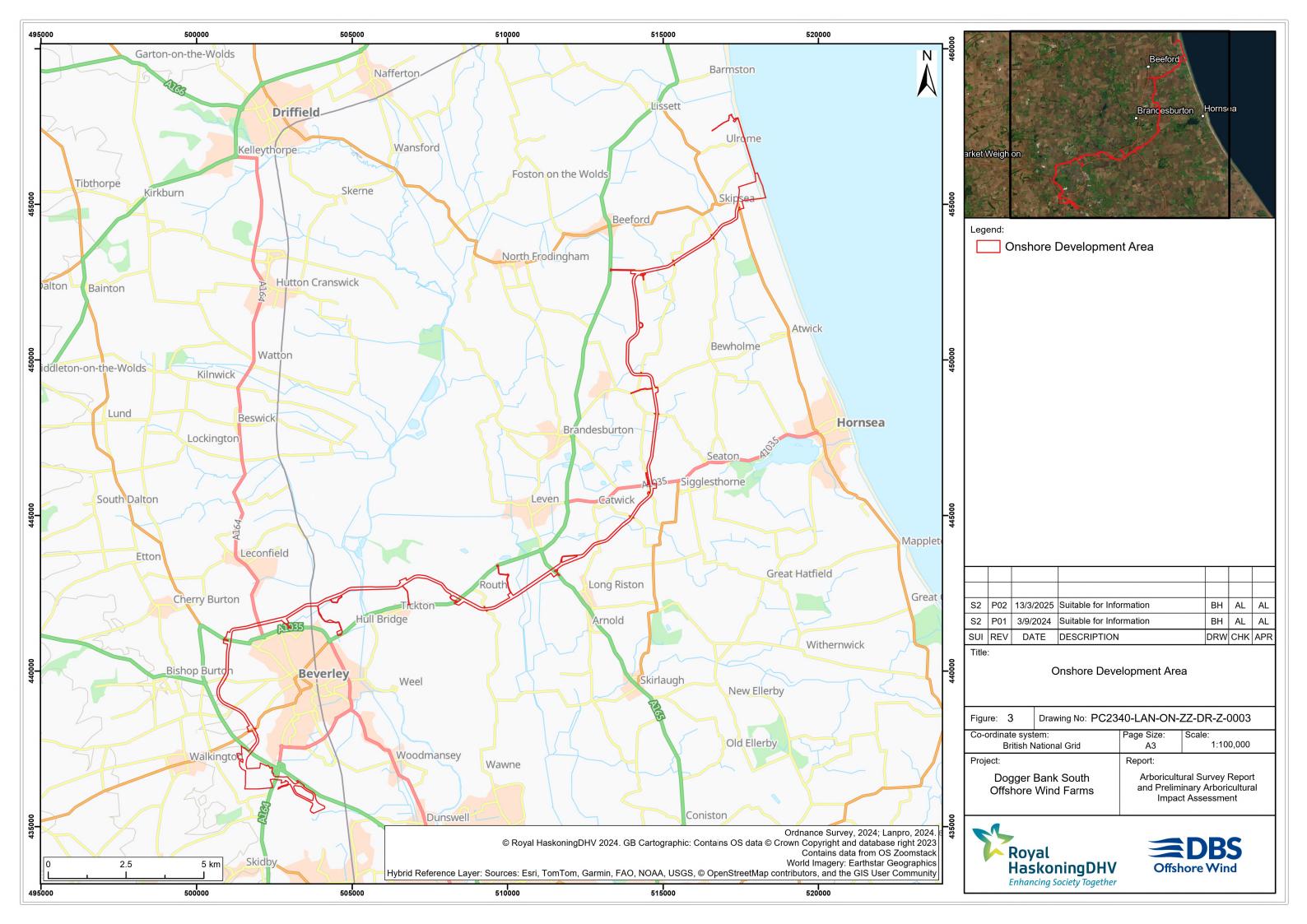




# **Appendix 5. Preliminary Tree Impact Plans**











#### Notes:

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Tree constraints are reflective of tree surveys undertaken between April 2024 – July 2024.

S2	P03	13/3/2025	Suitable for Information	вн	AL	AL
S2	P02	7/10/2024	Suitable for Information	ВН	AL	AL
S2	P01	3/9/2024	Suitable for Information	ВН	AL	AL
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	Bank South Wind Farms	and Prelim	ıral Survey Report inary Arboricultural ıt Assessment			









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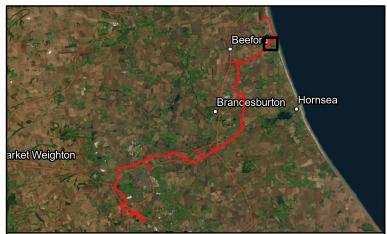
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S2	P03	13/3/2025	Suitable for Information	ВН	AL	AL
S2	P02	7/10/2024	Suitable for Information	ВН	AL	AL
S2	P01	3/9/2024	Suitable for Information	ВН	AL	AL
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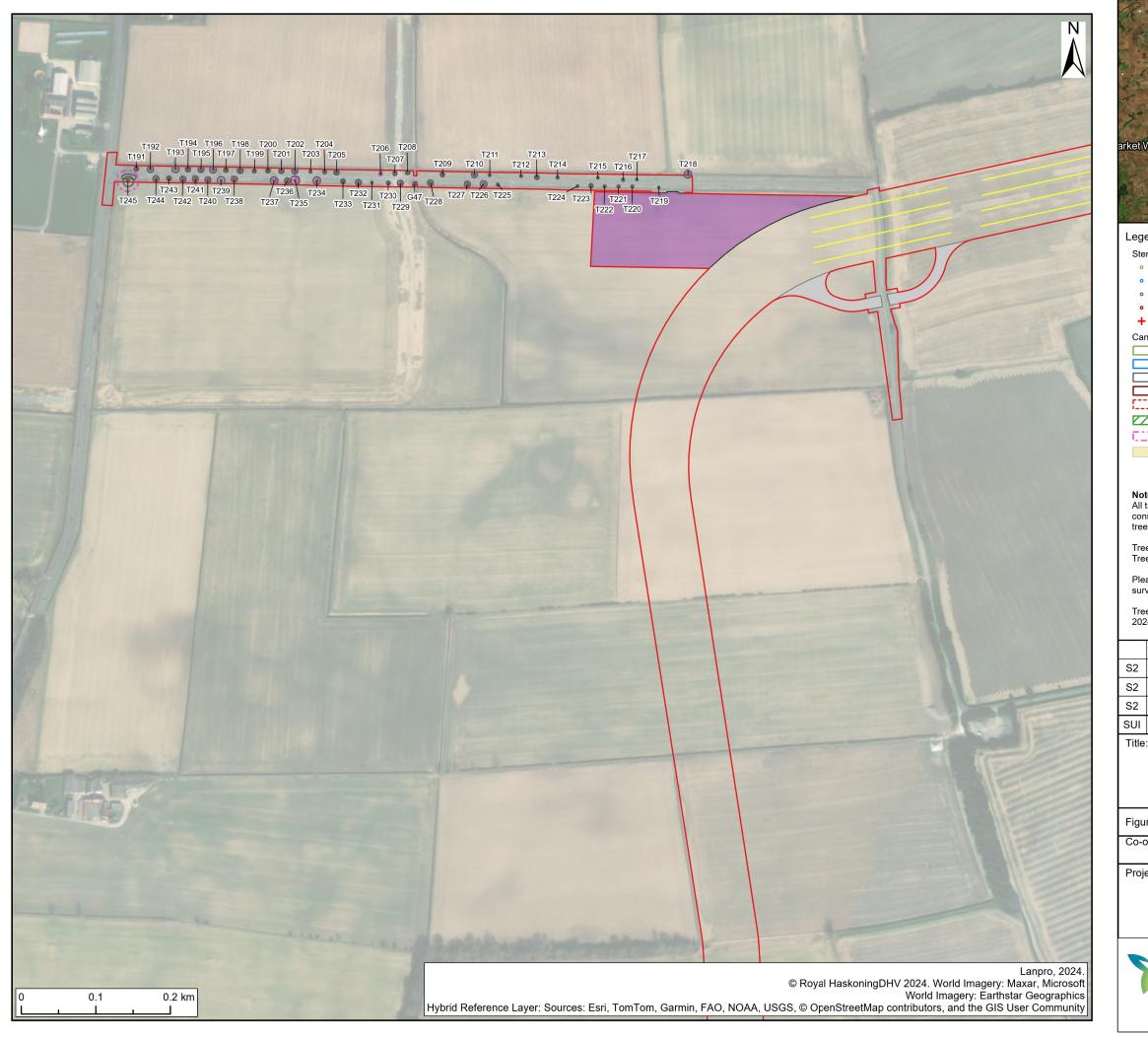
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SUI	REV	DATE	DESCRIPTION	DRW	СНК	APR

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Offshore	Wind Farms			









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Indicative Earthworks Extents

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S2	P03	13/3/2025	Suitable for Information	ВН	AL	AL
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#### Notes

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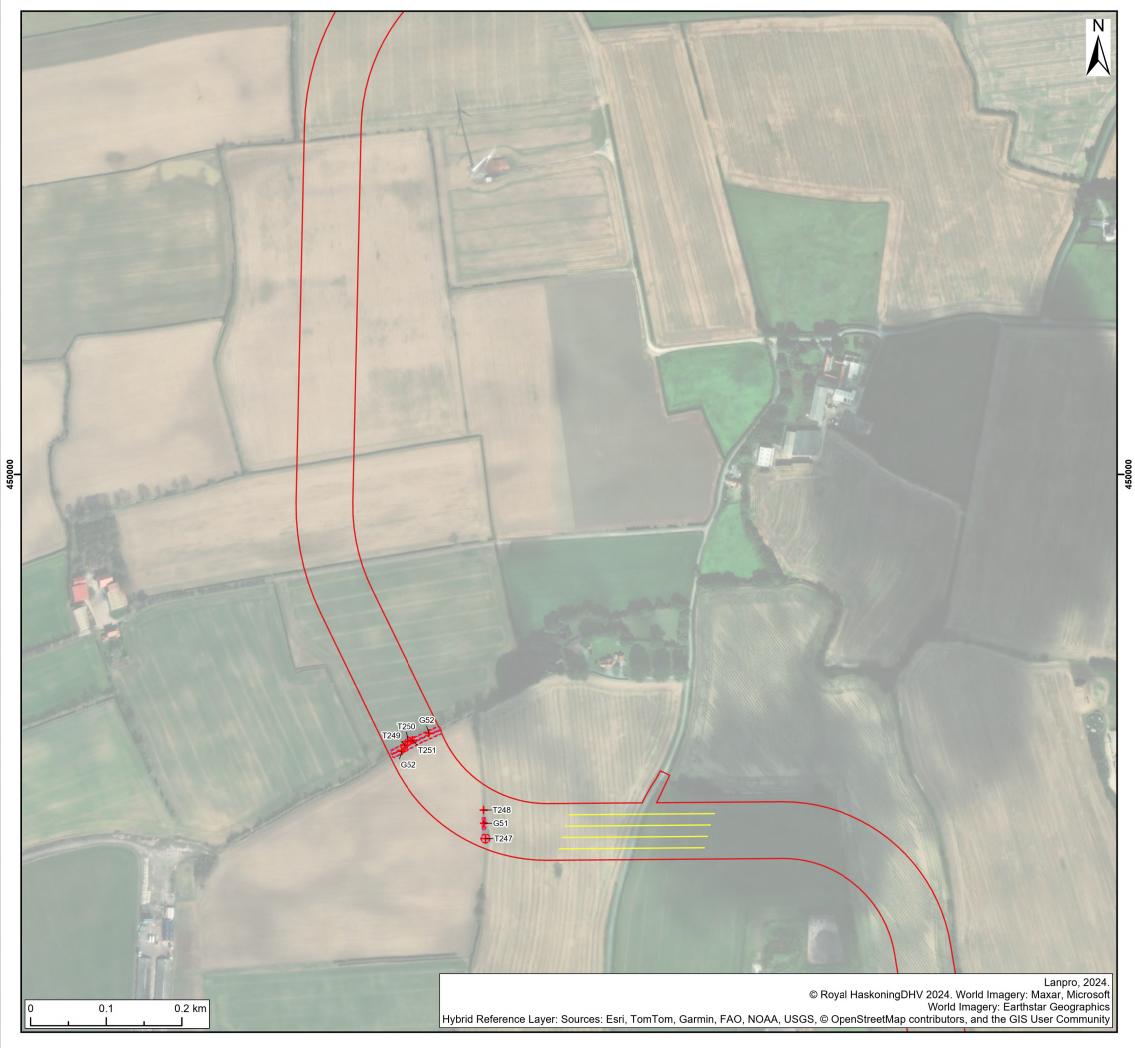
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S2	P03	13/3/2025	Suitable for Information	ВН	AL	AL
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#### Notes:

Potential Root Impacts

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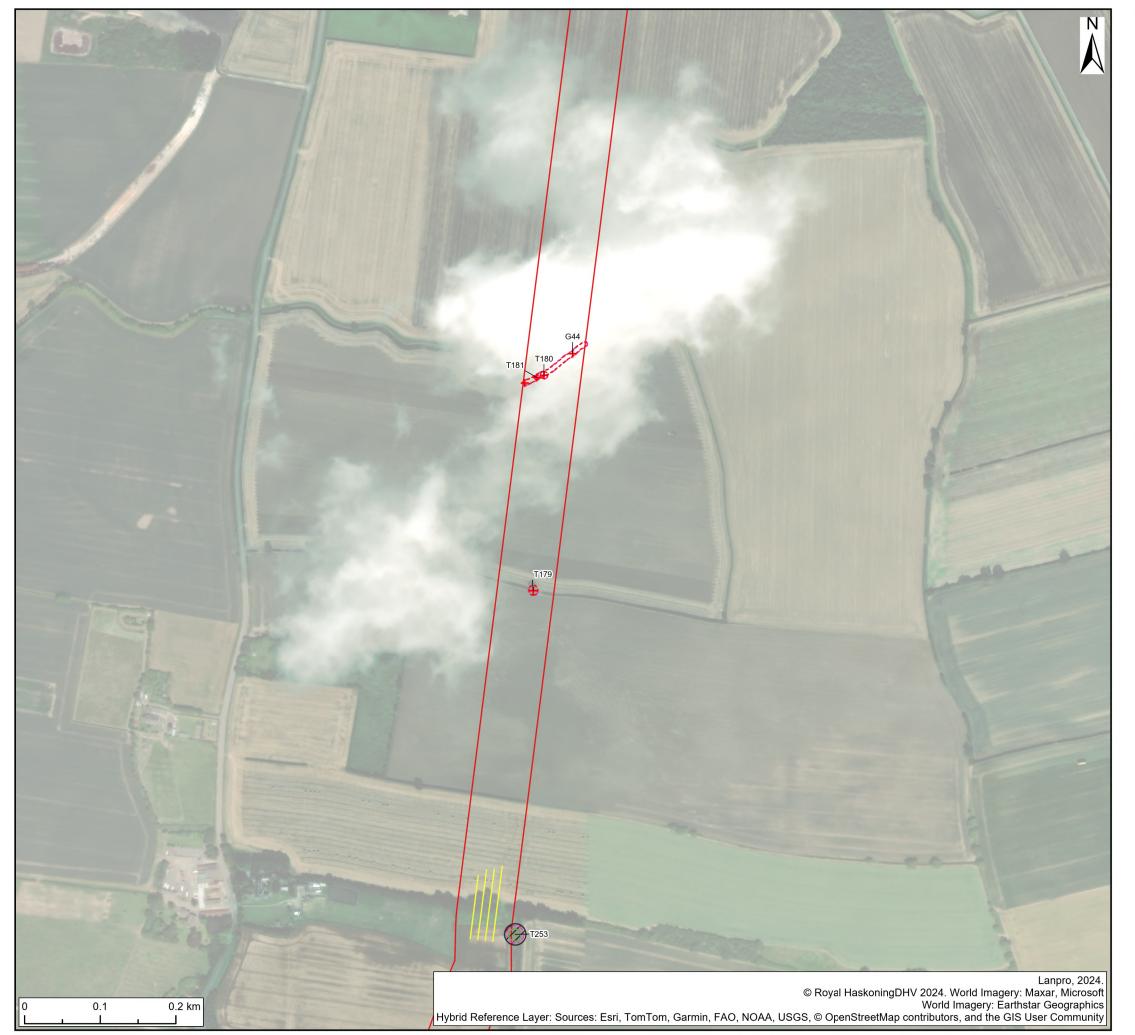
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SUI	REV	DATE	DESCRIPTION	DRW	СНК	APR

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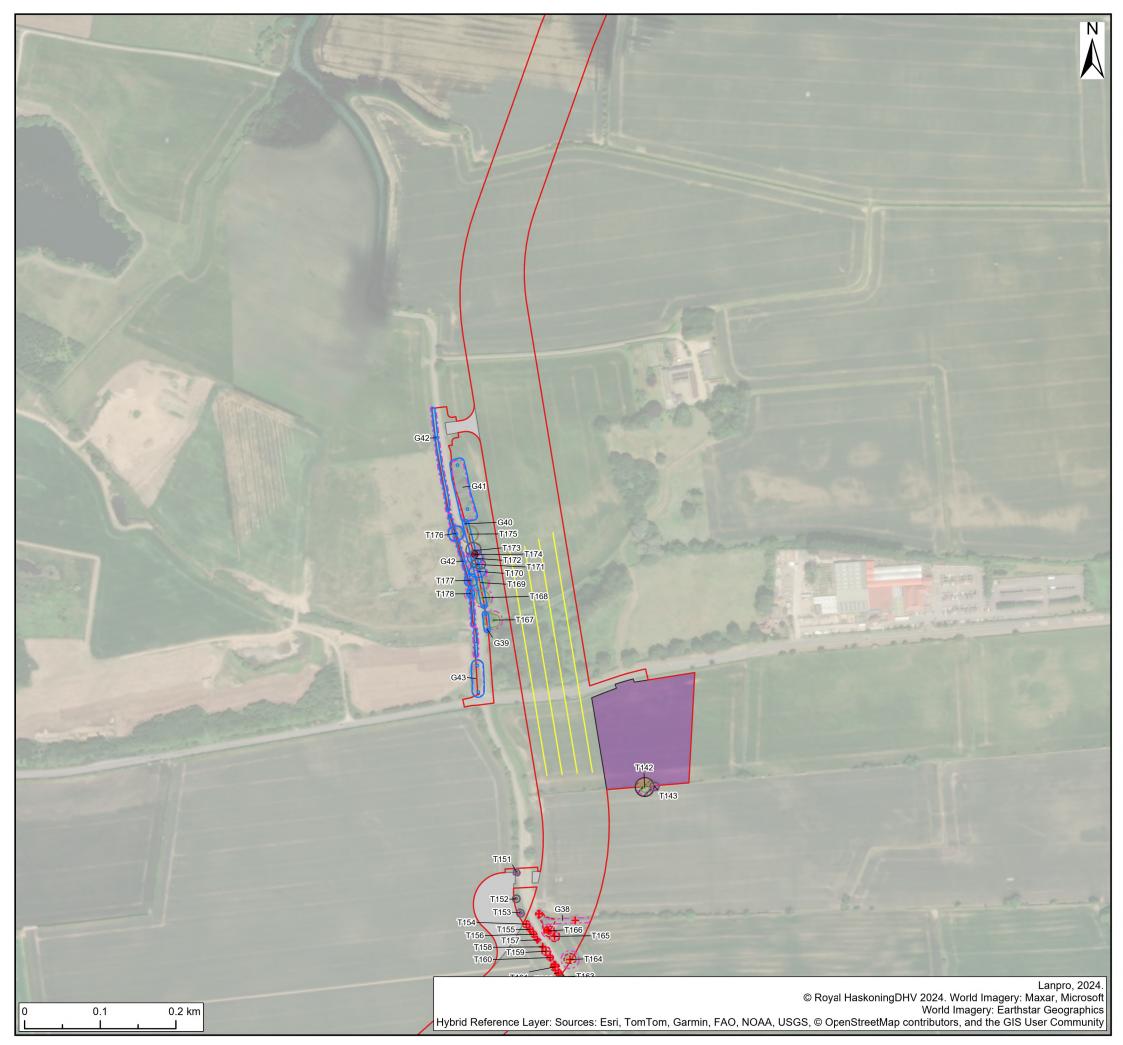
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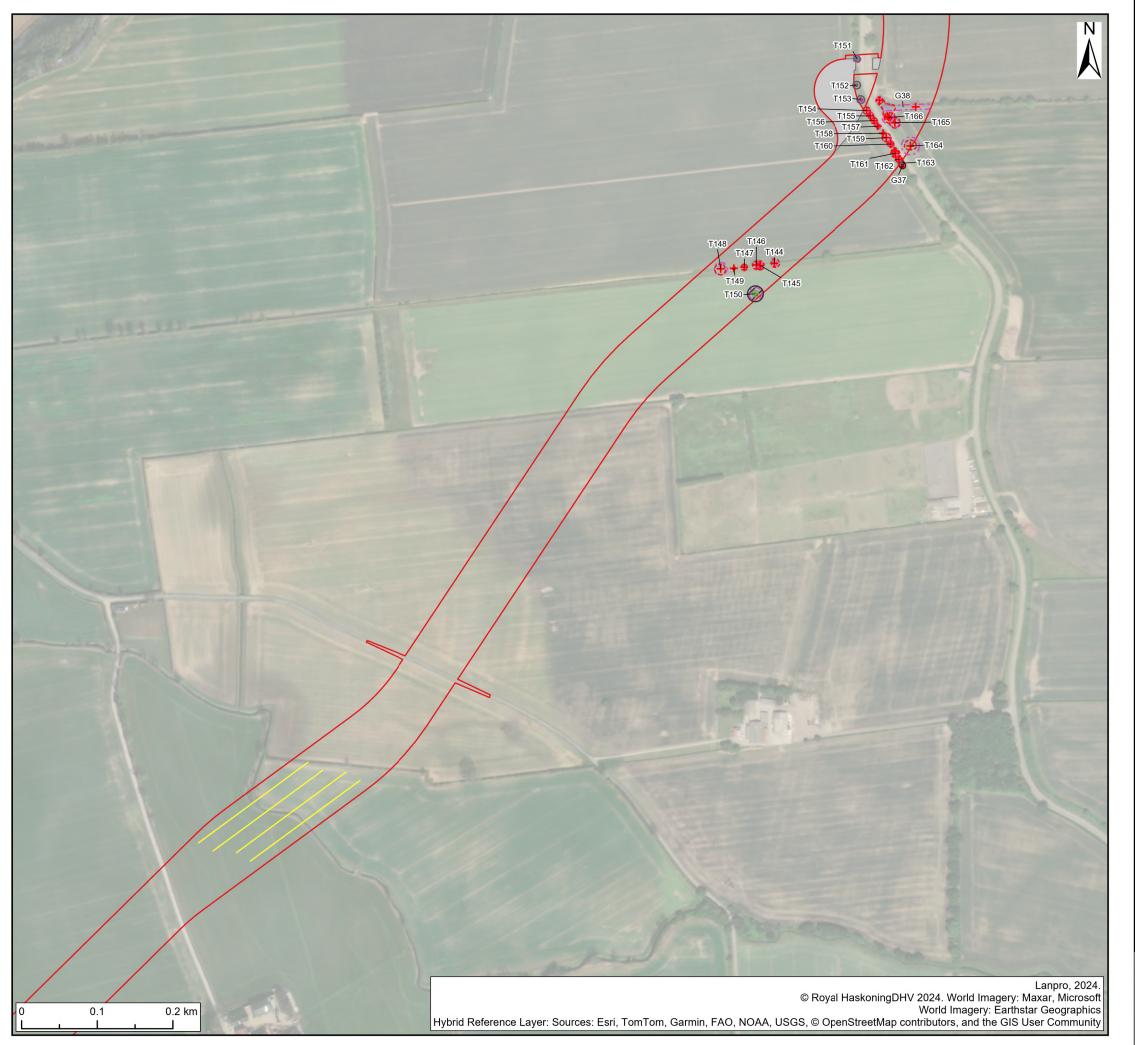
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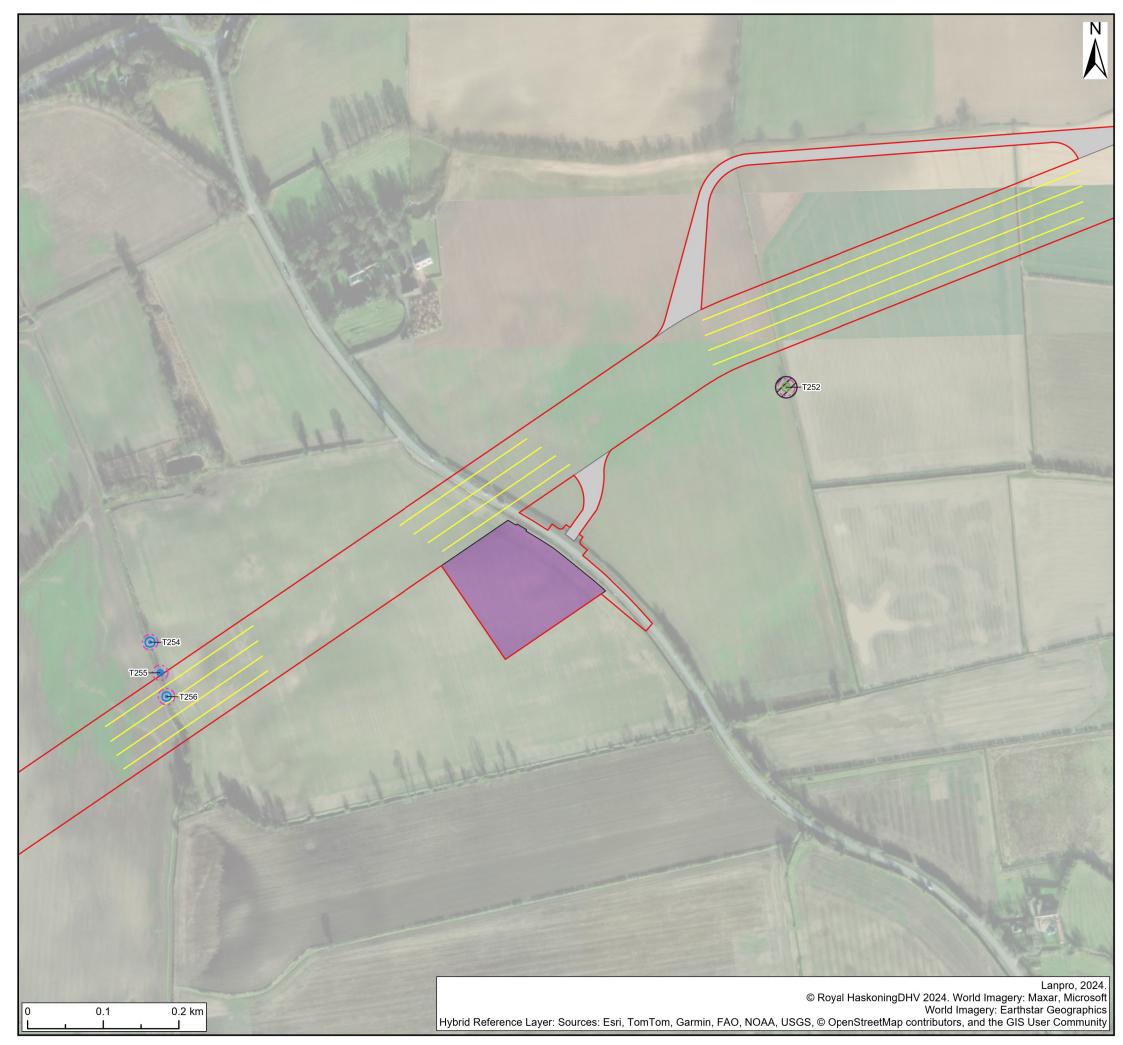
S2	P03	13/3/2025	Suitable for Information	вн	AL	AL
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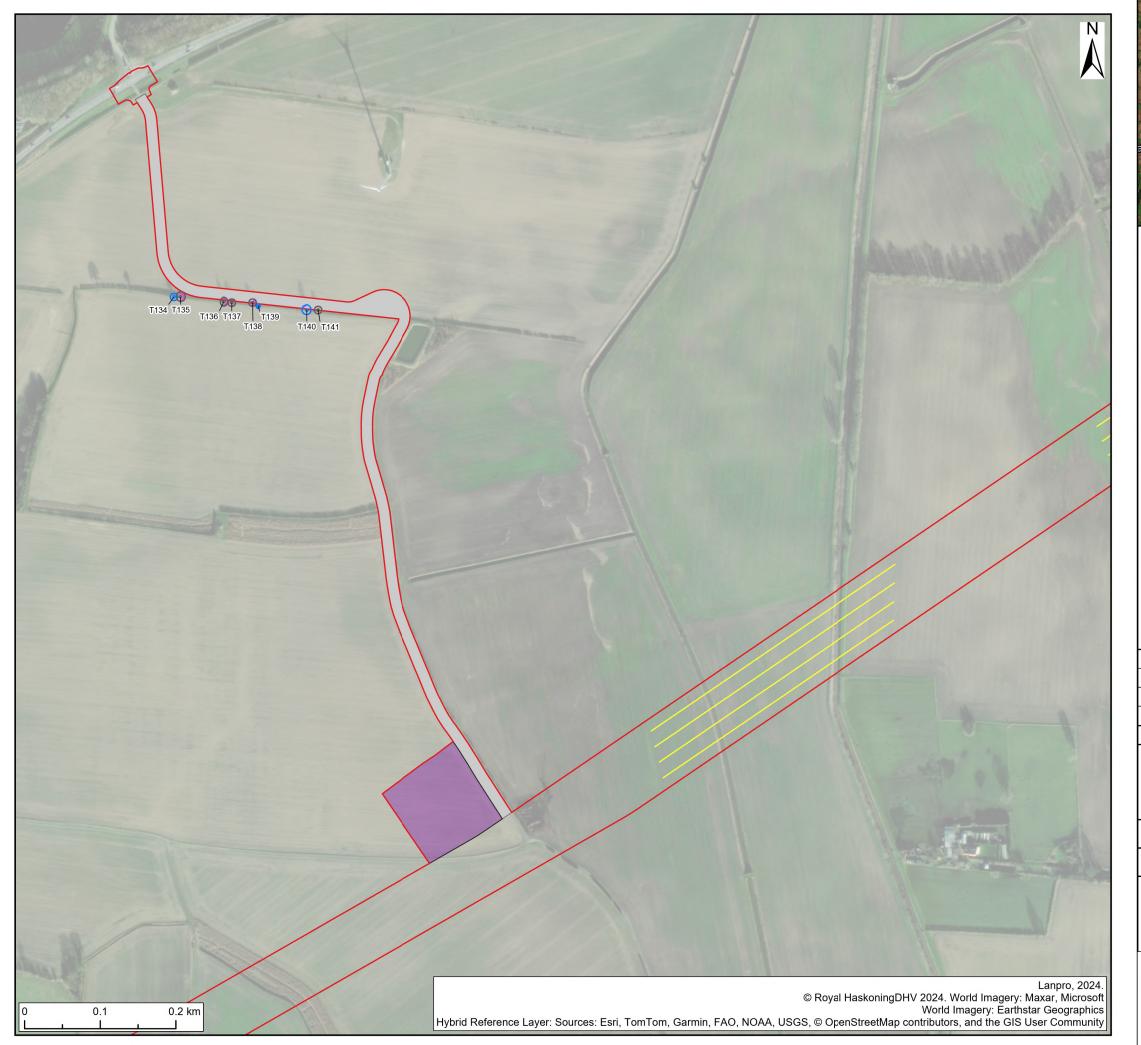
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SUI	REV	DATE	DESCRIPTION	DRW	СНК	APR

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#### Notes

Root Protection Areas
Potential Root Impacts

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Indicative Substation Temporary Construction Compound

Indicative Earthworks Extents

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#### Notes

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S2	P03	13/3/2025	Suitable for Information	ВН	AL	AL
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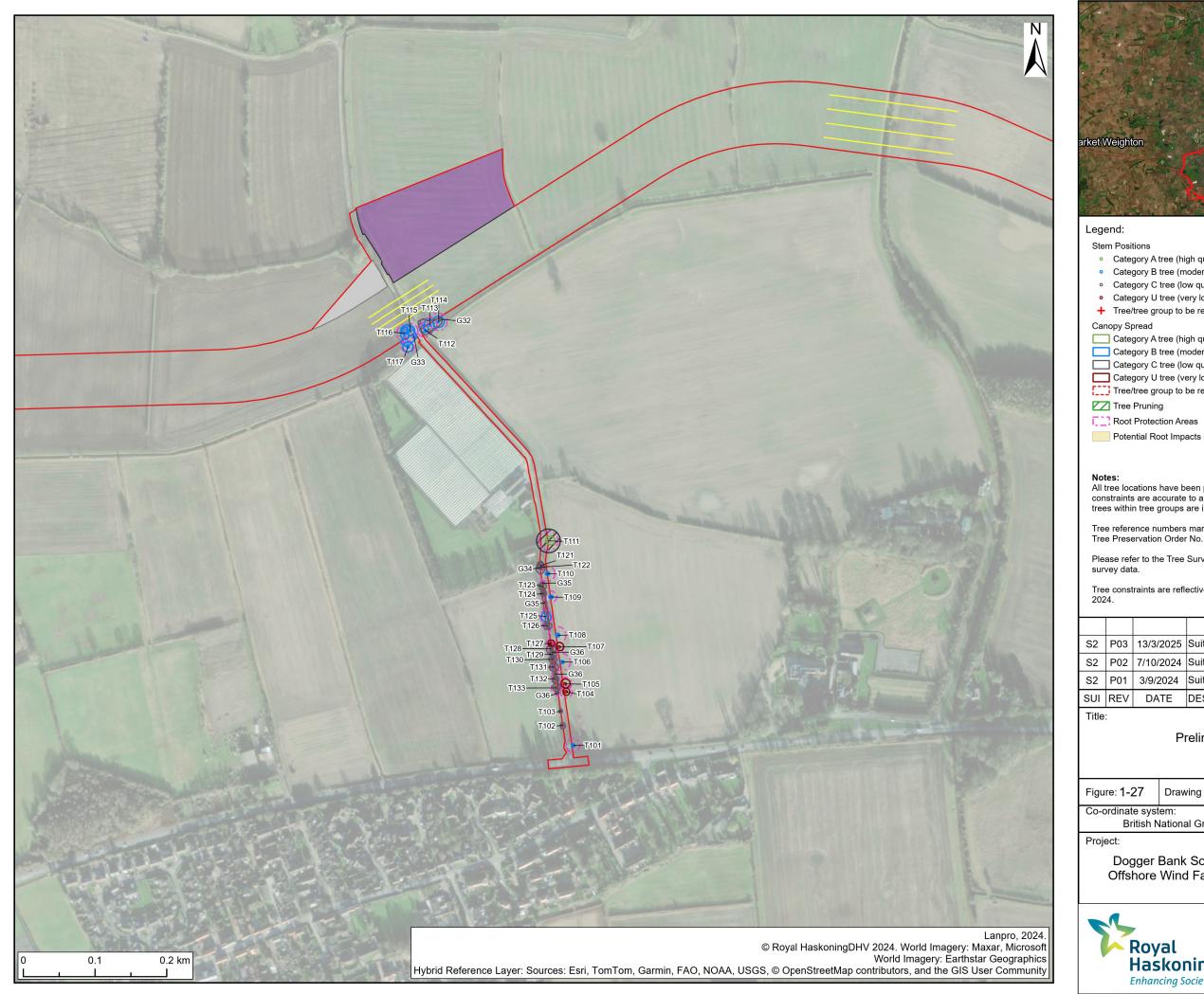
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	SUI	REV	DATE	DESCRIPTION	DRW	СНК	APR

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#### Legend: Veteran Tree Buffer Stem Positions Category A tree (high quality) Onshore Development Area Category B tree (moderate quality) Indicative Trenchless Crossing Category C tree (low quality) Category U tree (very low quality) Indicative Temporary Construction Compound Zones + Tree/tree group to be removed Indicative Zone Of Off Route Access Canopy Spread Category A tree (high quality) Category B tree (moderate quality) Indicative Permanent Drainage Category C tree (low quality) Category U tree (very low quality) Indicative Road Construction Area Tree/tree group to be removed Indicative Permanent Drainage Basins Tree Pruning

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Indicative Substation Temporary Construction Compound

Indicative Earthworks Extents

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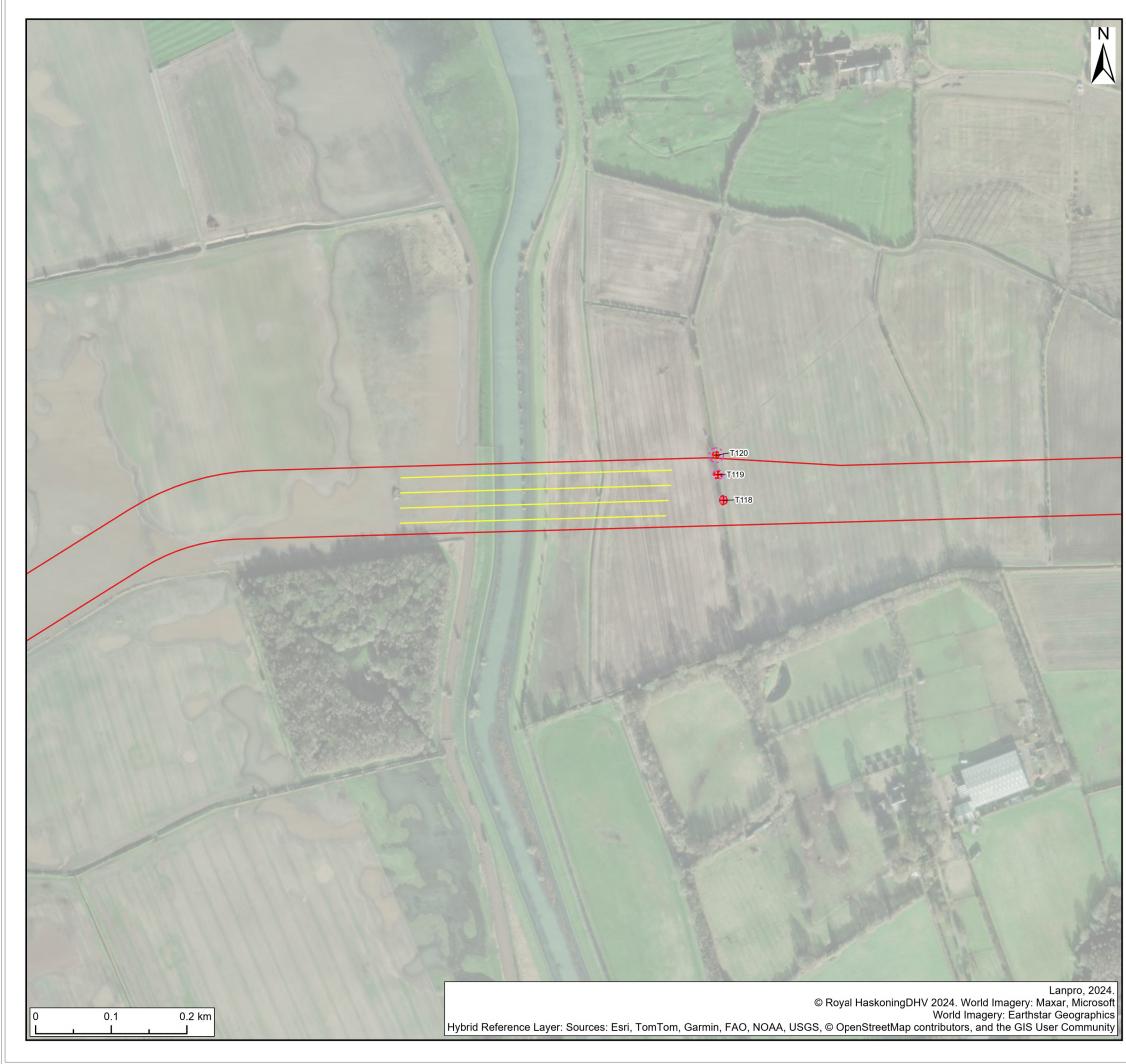
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	Bank South Wind Farms	Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment			









Tree Pruning

Root Protection Areas Potential Root Impacts

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Indicative Substation Temporary Construction Compound

Indicative Earthworks Extents

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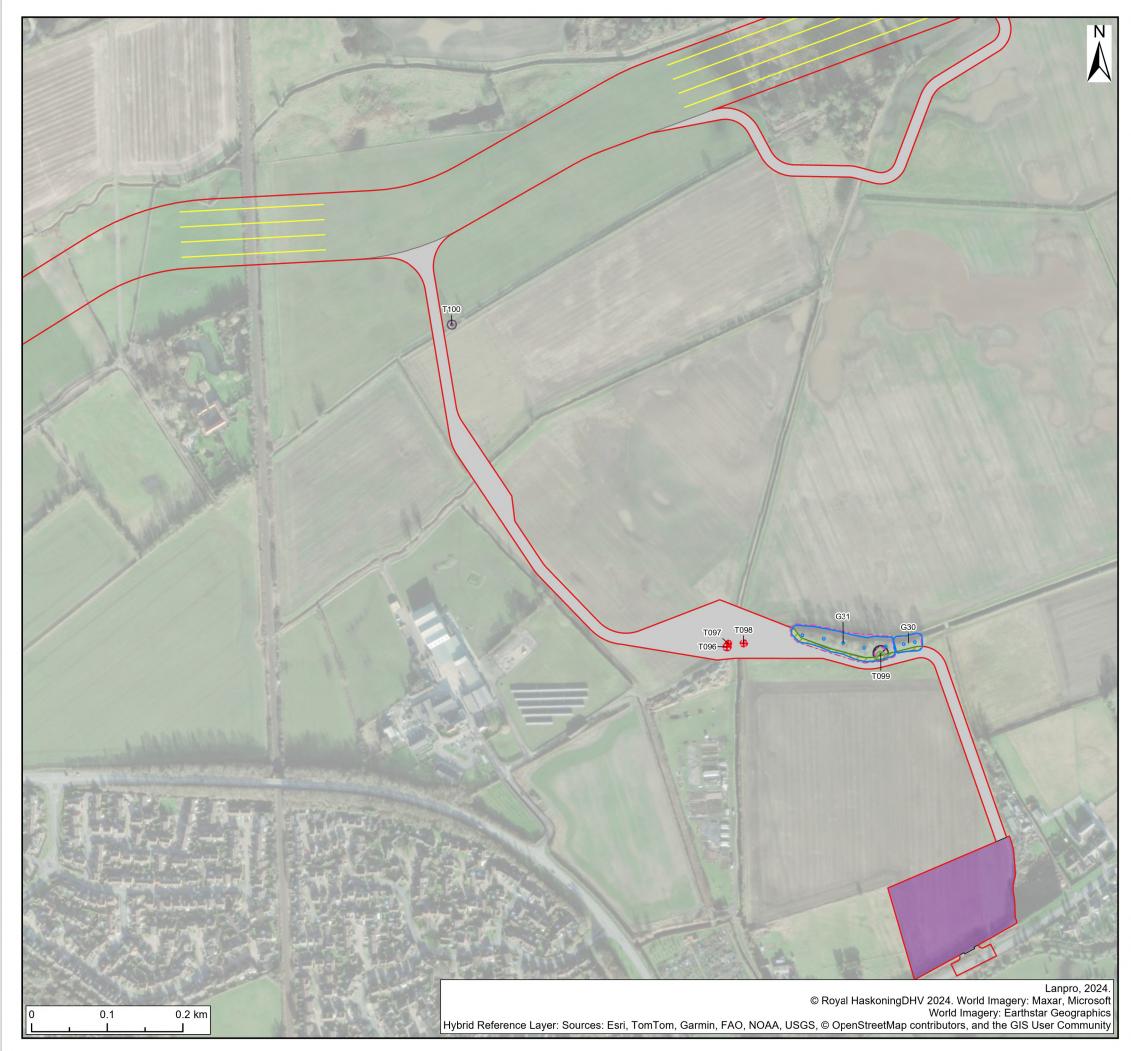
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#### Notes:

Potential Root Impacts

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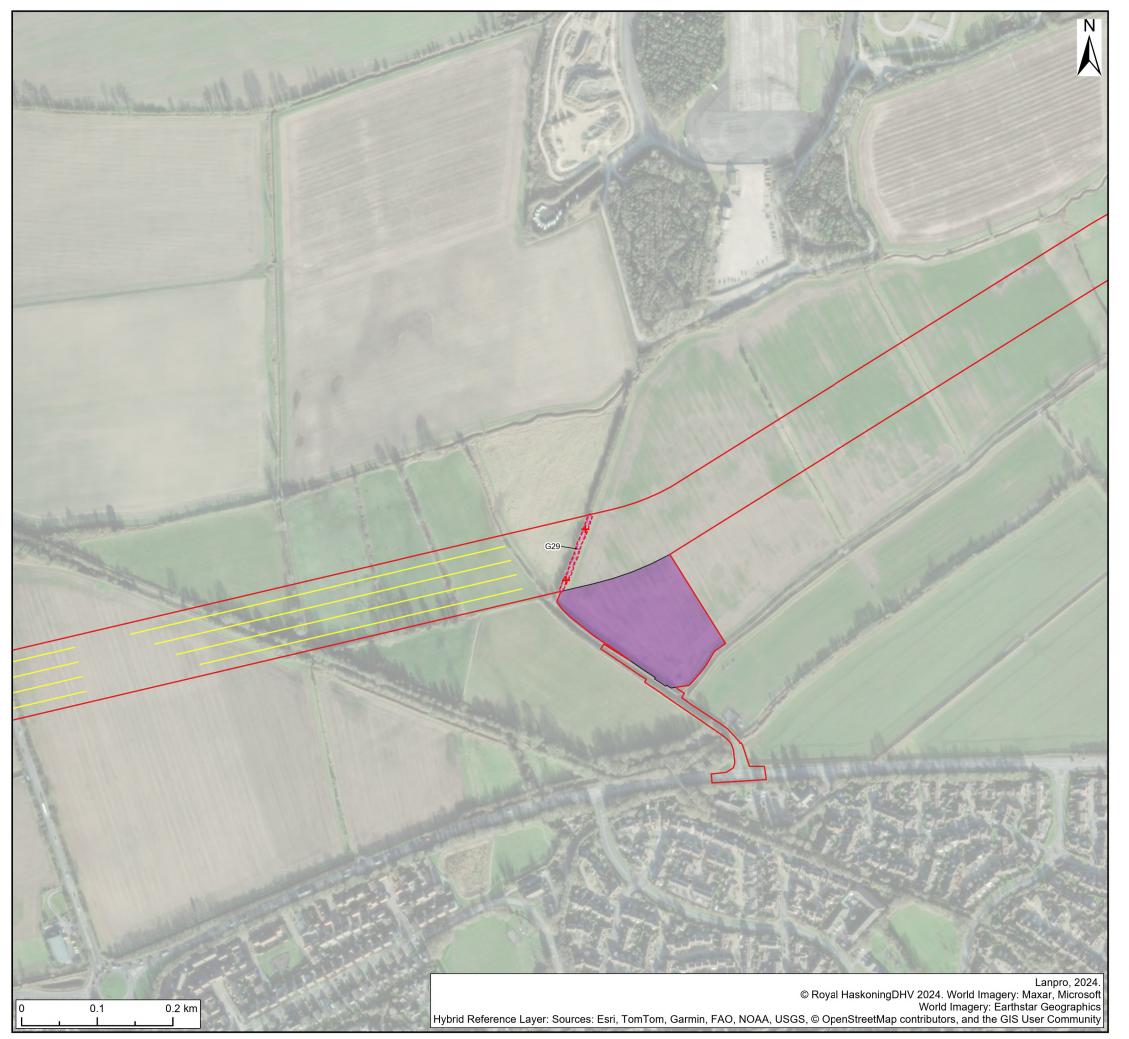
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# Stem Positions Category A tree (high quality) Category B tree (moderate quality) Category C tree (low quality) Category U tree (very low quality) Light Temporary Construction

Indicative Temporary Construction
Compound Zones

Canopy Spread

Category A tree (high quality)

Category B tree (moderate quality)

Indicative Zone Of Off Route
Access

Indicative Permanent Drainag

Category C tree (low quality)
Category U tree (very low quality)
Tree/tree group to be removed

+ Tree/tree group to be removed

Tree Pruning
Root Protection Areas

Potential Root Impacts

# Access Indicative Permanent Drainage Connections Indicative Road Construction Area Indicative Permanent Drainage Basins

Protection Areas Indicative Substation Temporary
Construction Compound

Indicative Earthworks Extents

#### Notes

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	S2	P02	7/10/2024	Suitable for Information	ВН	AL	AL
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# Preliminary Tree Impact Plan Sheet 21

Figure: 1-27 Drawing No: PC2340-LAN-ON-ZZ-DR-Z-0002

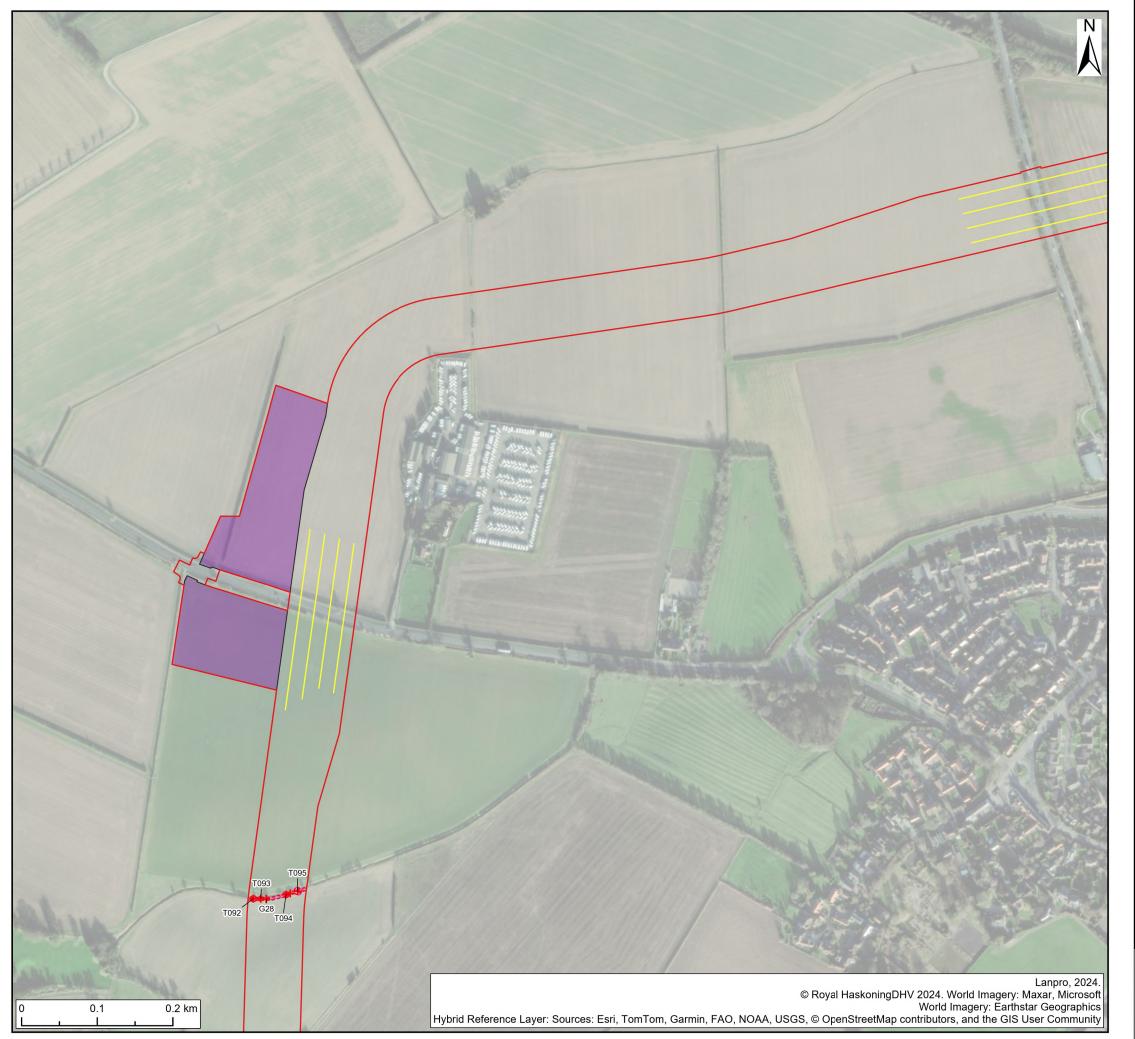
Co-ordinate system:
British National Grid Page Size:
A3 1:5,000

Project:

Dogger Bank South
Offshore Wind Farms Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment









Root Protection Areas Potential Root Impacts

All tree locations have been plotted using aerial imagery only, hence the positions of constraints are accurate to approximately +/- 3 metres. Locations of any individual trees within tree groups are indicative only.

Indicative Earthworks Extents

Tree reference numbers marked with an asterix symbol (e.g. G25\*) are protected by Tree Preservation Order No. 259 at the Former Broadgates Hospital.

Please refer to the Tree Survey Schedule for full British Standard 5837:2012 tree survey data.

Tree constraints are reflective of tree surveys undertaken between April 2024 – July

S2	P03	13/3/2025	Suitable for Information	ВН	AL	AL
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Report:			
Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment			
Figure: 1-27 Drawing No: PC23d Co-ordinate system: British National Grid Project: Dogger Bank South Offshore Wind Farms			









#### Notes:

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Report:				
Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment				
Figure: 1-27 Drawing No: PC23  Co-ordinate system:     British National Grid  Project:     Dogger Bank South     Offshore Wind Farms				









#### Notes

Root Protection Areas
Potential Root Impacts

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Indicative Substation Temporary Construction Compound

Indicative Earthworks Extents

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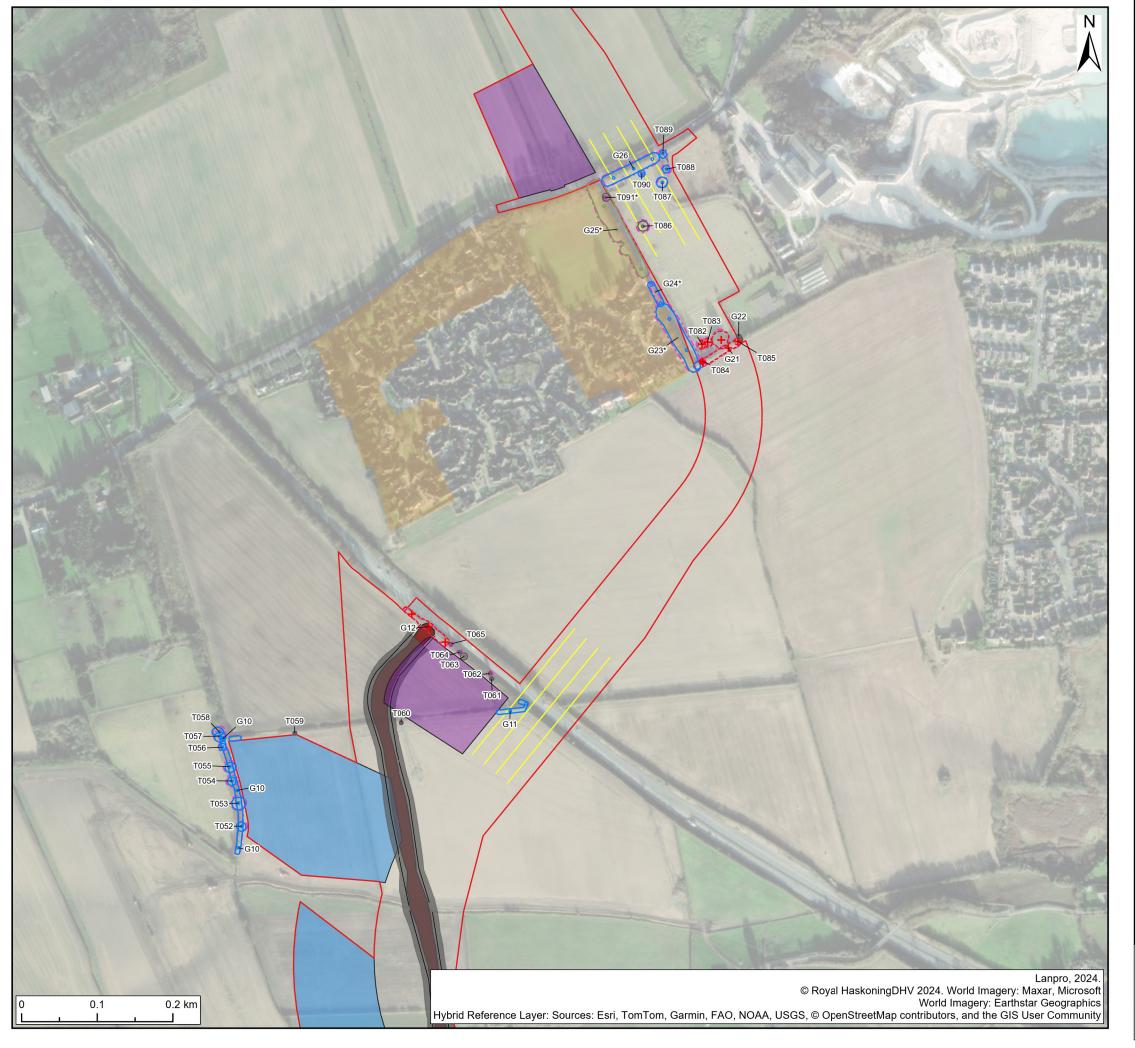
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#### Title

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Report:  Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment			









#### Notes

Tree/tree group to be removed

Tree Pruning

Root Protection Areas
Potential Root Impacts

Veteran Tree Buffer

All tree locations have been plotted using aerial imagery only, hence the positions of constraints are accurate to approximately +/- 3 metres. Locations of any individual trees within tree groups are indicative only.

Indicative Permanent Drainage Basins

Indicative Substation Temporary Construction Compound

Indicative Earthworks Extents

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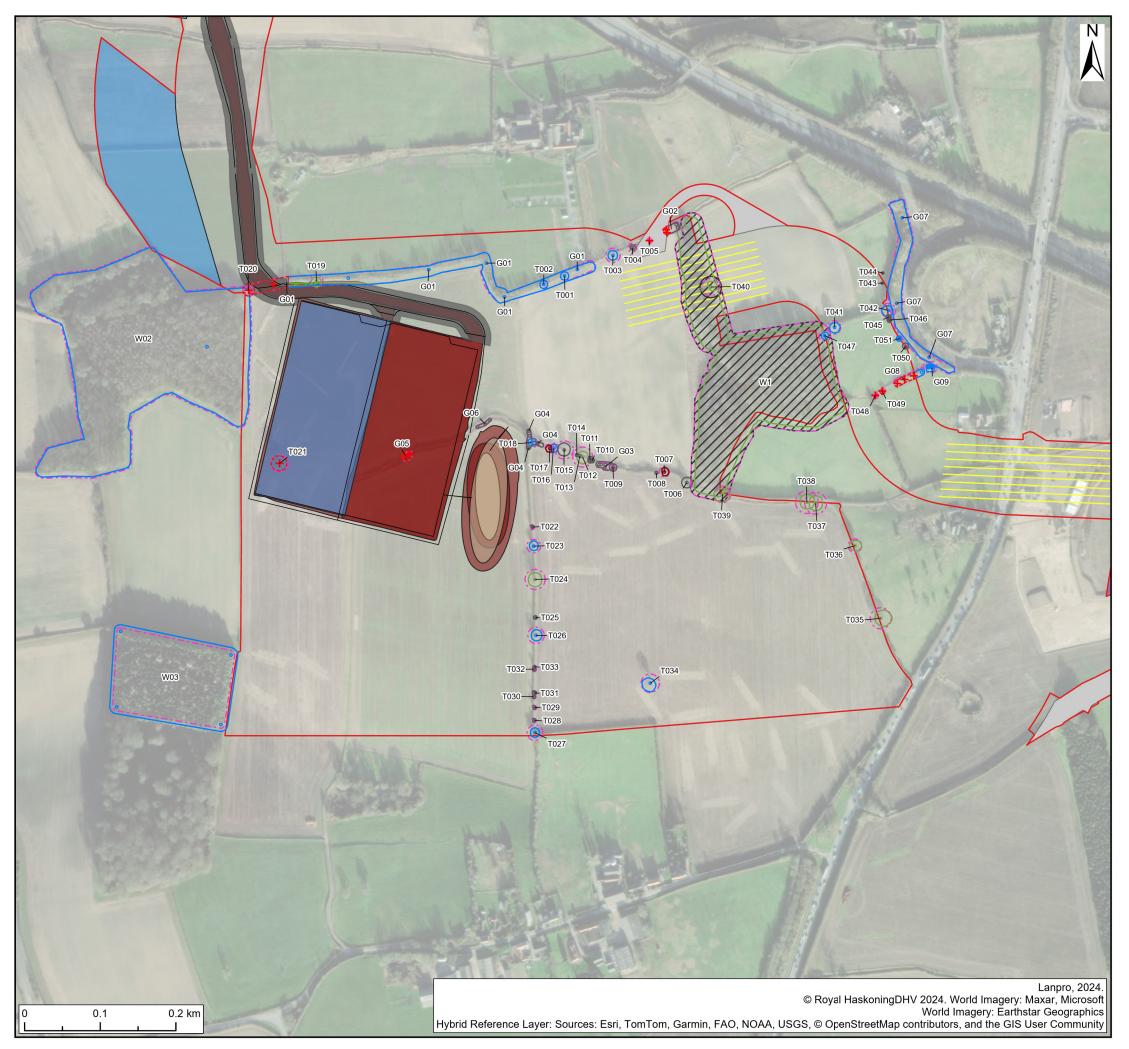
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#### Note

Root Protection Areas
Potential Root Impacts

All tree locations have been plotted using aerial imagery only, hence the positions of constraints are accurate to approximately +/- 3 metres. Locations of any individual trees within tree groups are indicative only.

Indicative Substation Temporary Construction Compound

Indicative Earthworks Extents

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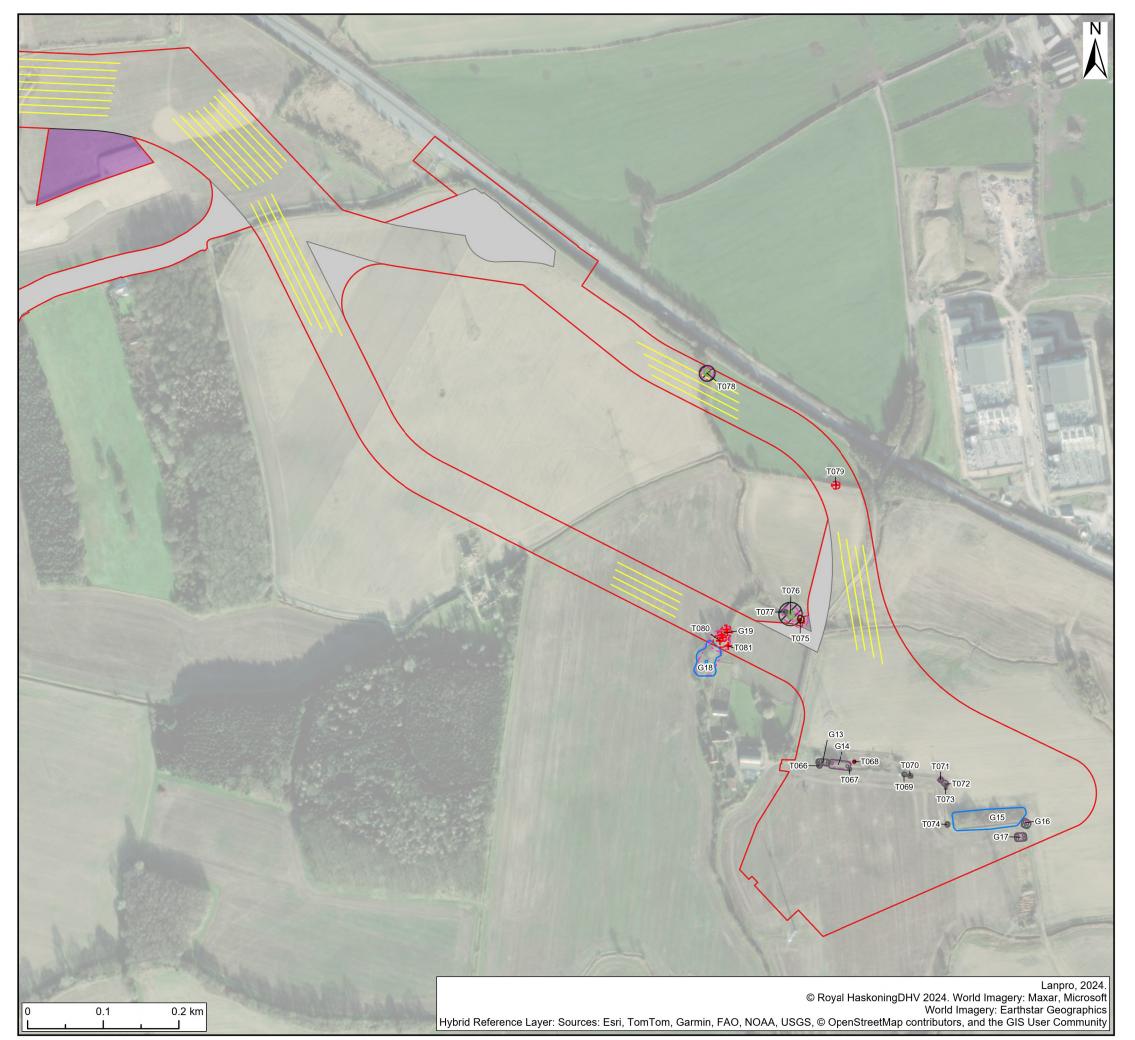
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Dogger Bank South Offshore Wind Farms	Arboricultural Survey Repor and Preliminary Arboricultura Impact Assessment









#### Stem Positions

- Category A tree (high quality)
- Category B tree (moderate quality)
- Category C tree (low quality)
- Category U tree (very low quality)
- + Tree/tree group to be removed

# Canopy Spread

- Category A tree (high quality)
- Category B tree (moderate quality)
- Category C tree (low quality)
- Category U tree (very low quality)
  Tree/tree group to be removed
- Tree Pruning
- Root Protection Areas
- Potential Root Impacts

- Veteran Tree Buffer
- Onshore Development Area
- Indicative Trenchless Crossing
- Indicative Temporary Construction Compound Zones
- Indicative Zone Of Off Route Access
- Indicative Permanent Drainage
- Indicative Road Construction Area
- Indicative Permanent Drainage Basins
- Indicative Substation Temporary Construction Compound
- Indicative Earthworks Extents

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Project:		Report:		
	Bank South Wind Farms	Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment		







# **Appendix 6. References**

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