

**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**

Part 1 of 2

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Glossary

Term	Definition
Ash Dieback	A disease affecting ash trees in the genus <i>Fraxinus</i> 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

1. 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.
2. 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.

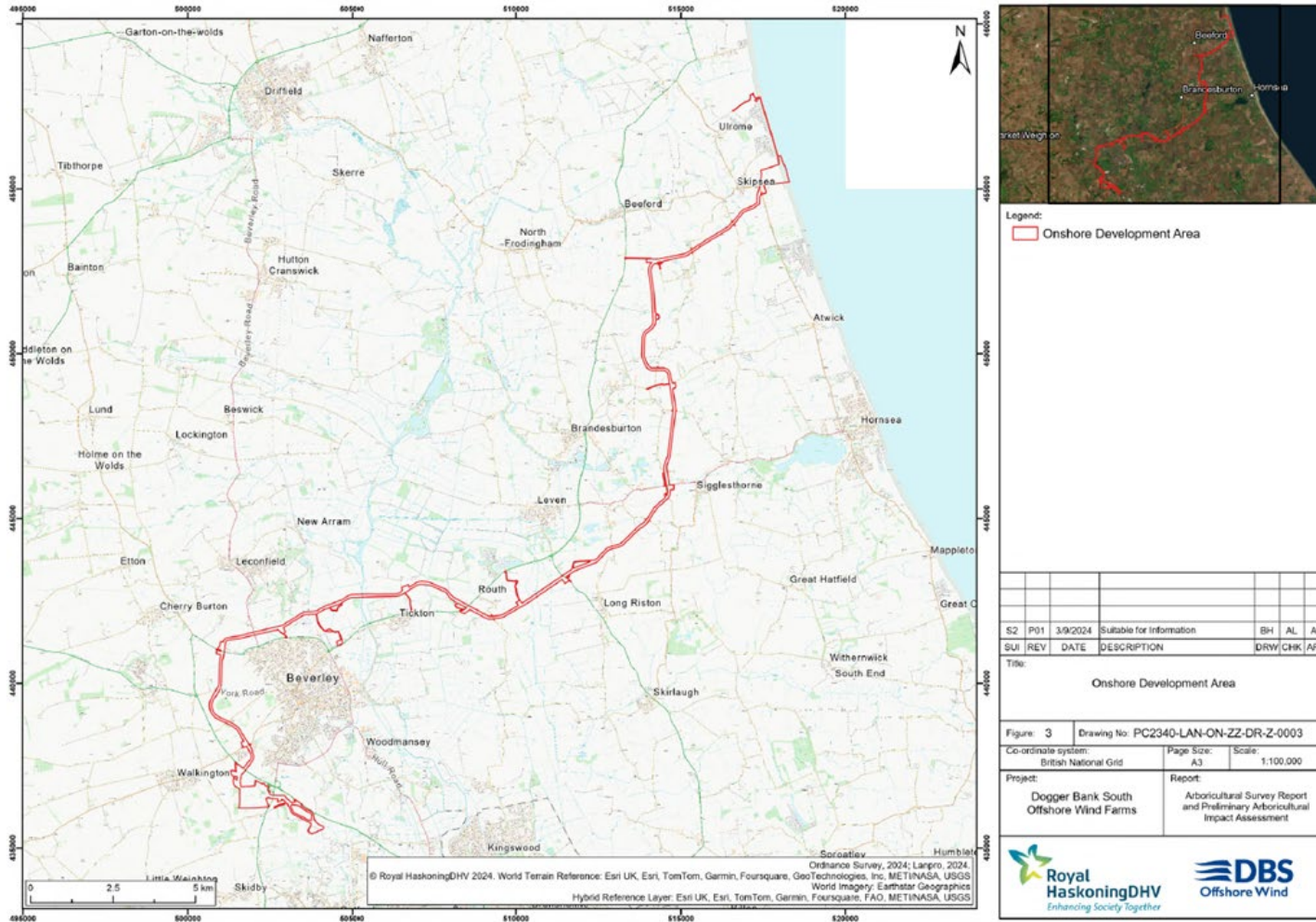


Plate 1-1 Onshore Development Area (outlined in red)

1.2 The Projects

4. 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".
12. 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 or 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.

15. 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]

21. 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).
24. 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"*.

25. 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.
31. 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.
32. 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.

33. BS5837:2012 then provides guidance on avoiding and minimising impacts to identified 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

34. 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.
35. 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.
41. 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.
42. RPAs were calculated using the standard formulas provided in BS5837:2012 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.
43. 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.

- 45. 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.
- 48. 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	<p>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.</p> <p>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:</p> <ul style="list-style-type: none"> ● Girth large for the tree species concerned ● Major trunk cavities or progressive hollowing ● Naturally forming water pools ● Decay holes ● Physical damage to trunk ● Bark loss ● Large quantity of dead wood in the canopy ● Sap runs ● Crevices in the bark, under branches or on the root plate sheltered from direct rainfall ● Fungal fruiting bodies (e.g. from heart rotting species)

	Definition
	<ul style="list-style-type: none"> • High number of interdependent wildlife species • Epiphytic plants • An 'old 'look • High aesthetic interest
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

50. 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.
51. 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.
52. 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.
53. 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.
54. 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

55. 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

57. 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

58. 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.
59. 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.
60. 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 micro-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.
61. 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 Siggleshorpe.
- 64. 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	<p>1 TPO 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 Tree Constraints Plan 3 of 27 in Appendix 4. This area Order protects all trees present in the TPO area in the year the TPO was made.</p> <p>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</p>

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 Plate 4-1 below. Two 'notable' tree records were also present within 50m of the Onshore Development Area as shown in below.

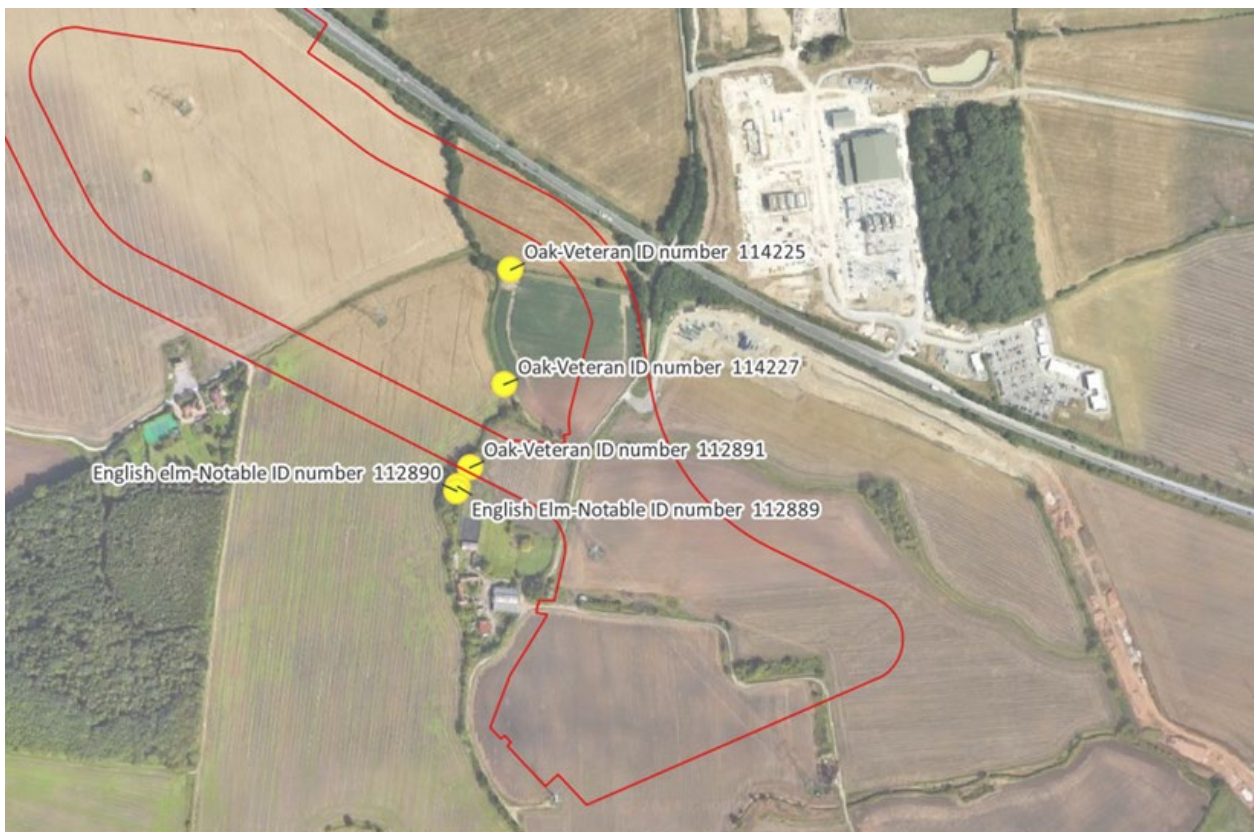


Plate 4-1 Ancient and Veteran Tree Records with the Onshore Development Area (latter shown outlined red)

68. The veteran tree within the Onshore Development Area is listed as a veteran oak *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.

69. During the tree survey, this oak was recorded as To8o (see Tree Constraints Plan Sheet 1 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.
71. 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

72. 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: T040 ash (Tree Constraints Plan 2 of 27), T076 ash (Tree Constraints Plan 1 of 27), T078 ash (Tree Constraints Plan 1 of 27), T099 ash (Tree Constraints Plan Sheet 8 of 27), T111 ash (Tree Constraints Plan Sheet 10 of 27), T142 ash (Tree Constraints Plan Sheet 14 of 27), T150 ash (Tree Constraints Plan 15 of 27), T252 ash (Tree Constraints Plan Sheet 14 of 27) and T253 oak (Tree Constraints Plan Sheet 18 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 (T040 ash).

Table 4-2 Summary of Tree Classification

BS5837:2012 Quality Category	Number		
	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

80. 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, drainage basins and earthworks.

Table 5-1 Summary of Known Tree Removals

BS5837:2012 Quality Category	Tree Reference	Preliminary Tree Impact Plan Reference
Category A trees and tree groups	To12 oak	Sheet 2 of 27
	To19 oak	Sheet 2 of 27
	To21 oak (Photographs 4 and 5, Appendix 3)	Sheet 2 of 27
Category B trees and tree groups	To16 sycamore	Sheet 2 of 27
	To18 sycamore	Sheet 2 of 27
	To20 oak	Sheet 2 of 27
	To23 oak	Sheet 2 of 27
	T189 crab apple	Sheet 21 of 27
	T246 sycamore	Sheet 19 of 27
	G01 (partial removal of approximately 160m length)	Sheet 2 of 27
	G12	Sheet 3 of 27
Category C trees and tree groups	To05 sycamore	Sheet 2 of 27
	To11 sycamore	Sheet 2 of 27
	To13 sycamore	Sheet 2 of 27
	To14 sycamore	Sheet 2 of 27

BS5837:2012 Quality Category	Tree Reference	Preliminary Tree Impact Plan Reference
	To15 ash (Photograph 6, Appendix 3)	Sheet 2 of 27
	To22 ash	Sheet 2 of 27
	To96 goat willow	Sheet 8 of 27
	To97 goat willow	Sheet 8 of 27
	To98 horse chestnut	Sheet 8 of 27
	T188 ash	Sheet 21 of 27
	Go2 (partial removal)	Sheet 2 of 27
	Go3	Sheet 2 of 27
	Go4	Sheet 2 of 27
	Go6	Sheet 2 of 27
Category U trees and tree groups	Go5	Sheet 2 of 27
	To17 sycamore	Sheet 2 of 27

- 81. To12 oak is a mature oak in good condition whilst To19 oak is early-mature and noted to have high wildlife value due to deadwood in the crown and cavities. 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 construction of the Onshore Substation Zone will result in root impacts to Category A tree T024 oak (Photograph 7, Appendix 3) from the installation of drainage connection pipework through its Root Protection Area as shown in the Preliminary Tree Impact Plan Sheet 2 in Appendix 5. The pipework will be installed approximately 4m from the stem of T024. Trenching within the RPA may lead to the severance of structural roots (>25mm in diameter) important for tree stability and the loss of fibrous roots important for water and nutrient acquisition and gaseous exchange. Without mitigation, T024 is likely to be negatively impacted by the proposed work within its RPA and may suffer canopy decline and a shortened life expectancy. Mitigation is provided in section 6.2.8 which will result in neutral residual impact to T024 oak.
86. Root impacts may also occur to Category A tree T039 oak (Photograph 8, Appendix 3), located on sheet 2 in of the Preliminary Tree Impact Plan, in Appendix 5. The earthworks area for the drainage basin overlaps with the RPA of T039 by 28m² (8% of T039's total RPA) and will be 8m from T039's stem. At this distance from the stem, loss of fibrous roots (<25mm in diameter) is likely during excavation. A minor impact to T039's canopy vitality is predicted at most from this root loss and the impact is unlikely to shorten the overall life expectancy of T039. Mitigation is provided in section 6.2.7 which will result in a neutral residual impact to T039 oak.
87. The earthworks for the drainage basin also has a very minor overlap with the Veteran Tree Buffer for ancient woodland W1. The overlap is up to 1m into the 15m Veteran Tree Buffer for the woodland. Minor root impacts to the predominantly early mature sycamore trees within the woodland is possible alongside potential dust impacts to the southern part of the woodland more broadly. Mitigation is provided in section 6.2.7 which will result in a neutral residual impact to W1.
88. Root impacts to Category A veteran tree T142 ash (Photograph 9, Appendix 3) and Category C tree T143 ash, located on Sheet 17 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 6.2.15 which will result in a neutral residual impacts to T142 ash and T143 ash.
89. There is a small incursion (32m² or 4%) into the Veteran Tree Buffer Zone of T076 ash for an indicative Temporary Construction Access, located on Sheet 1 of the Preliminary Tree Impact Plan, located in Appendix 5. The indicative access is 12m from T076's stem. Minor negative impacts to the roots of T076 ash are anticipated at most due to possible soil compaction within the Veteran Tree Buffer Zone. 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 6.2.14 which will result in a neutral residual impact to T076 ash.

90. Root impacts may also result from minor RPA incursions (<7% total RPA) to Category B trees T053 oak and T055 oak for the Onshore Substation Zone Temporary Construction Compound, located on Sheet 3 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 6.2.15 which will result in a neutral residual impacts to T053 oak and T055 oak.

5.2 Possible Arboricultural Impacts

5.2.1 Tree Removals

91. 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 groups	T080 oak	Sheet 1 of 27
	T082 sycamore	Sheet 3 of 27
	T083 sycamore	Sheet 3 of 27
	T118 oak	Sheet 9 of 27
	T119 oak	Sheet 9 of 27
	T120 oak	Sheet 9 of 27
	T148 ash	Sheet 16 of 27
	T164 ash	Sheet 16 of 27
	T165 field maple	Sheet 16 of 27
	T184 crab apple	Sheet 21 of 27
	T185 apple	Sheet 21 of 27
	T186 crab apple	Sheet 21 of 27
	G19	Sheet 1 of 27

BS5837:2012 Quality Category	Tree Reference	Preliminary Tree Impact Plan Reference
	G21 (partial removal of 60m linear extent)	Sheet 3 of 27
	G20	Sheet 3 of 27
	G27	Sheet 4 of 27
	G29	Sheet 7 of 27
	G44	Sheet 18 of 27
	G45	Sheet 21 of 27
	G46	Sheet 21 of 27
Category C trees and tree groups	To81 goat willow	Sheet 18 of 27
	To84 elder	Sheet 3 of 27
	To85 sycamore	Sheet 3 of 27
	To92 hawthorn	Sheet 6 of 27
	To93 blackthorn	Sheet 6 of 27
	To94 hawthorn	Sheet 6 of 27
	To95 hawthorn	Sheet 6 of 27
	T144 ash	Sheet 16 of 27
	T145 ash	Sheet 16 of 27
	T146 ash	Sheet 16 of 27
	T147 oak	Sheet 16 of 27
	T149 horse chestnut	Sheet 16 of 27
	T154 ash	Sheet 17 of 27
	T155 field maple	Sheet 17 of 27
T156 field maple	Sheet 17 of 27	

BS5837:2012 Quality Category	Tree Reference	Preliminary Tree Impact Plan Reference
	T157 elm	Sheet 17 of 27
	T158 hawthorn	Sheet 17 of 27
	T159 ash	Sheet 17 of 27
	T161 ash	Sheet 17 of 27
	T162 ash	Sheet 17 of 27
	T166 ash	Sheet 17 of 27
	T179 ash	Sheet 18 of 27
	T180 ash	Sheet 18 of 27
	T181 ash	Sheet 18 of 27
	T182 ash	Sheet 21 of 27
	T183 oak	Sheet 21 of 27
	T187 ash	Sheet 21 of 27
	T247 ash	Sheet 20 of 27
	T248 elder	Sheet 20 of 27
	T249 ash	Sheet 20 of 27
	T250 ash	Sheet 20 of 27
	T251 ash	Sheet 20 of 27
	G28	Sheet 6 of 27
	G38	Sheet 17 of 27
	G49	Sheet 19 of 27
	G51	Sheet 20 of 27
	G52	Sheet 20 of 27
	T160 field maple	Sheet 17 of 27

BS5837:2012 Quality Category	Tree Reference	Preliminary Tree Impact Plan Reference
Category U trees and tree groups	G37	Sheet 17 of 27

- 92. 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].
- 93. 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 6.2.10 which will minimise tree losses and reduce the severity of impacts to the health and longevity of retained trees.
- 94. 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 6.2.12 and 6.2.13 which will result in neutral residual impacts to retained trees that may have been affected by soil compaction.
- 95. 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

- 96. Root impacts are 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 8 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.

97. 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 13 of the Preliminary Tree Impact Plan, located in Appendix 5. There 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.
98. Mitigation which commits to avoid incursions into RPAs is provided in section 6.2.14 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

99. 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 16 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 6.2.10, neutral residual impacts to T150 are anticipated.
100. 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

101. **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).
102. 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 6.2.16. Compensatory tree planting will be required to replace any removed trees.
103. 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

104. 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

105. **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
Known Impacts	Installation of Onshore Substation Zone and associated permanent access road and drainage basin.	Loss of 21 individual trees and full or partial loss of seven tree groups.	Compensatory tree planting
		Root impacts to two Category A oak trees and ancient woodland W1.	Avoidance of RPAs and Veteran Tree Buffer Zones when installing drainage connection pipework and undertaking earthworks for the drainage basin. Tree Protection Barriers and precautionary working methods required.
	Temporary Construction Compounds	Root and canopy impacts to Category A veteran tree T142 ash, two Category B trees (T053 and T055) 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.

	Construction Stage	Arboricultural Impact	Mitigation/Compensation Options
Possible Impacts	Open cut trenching for Onshore Export Cables' installation	Removal of 12 individual Category B trees and 8 Category B tree groups, 32 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.
	Temporary Construction Accesses	Soil compaction and loss of vitality for Category A veteran ash T099, Category B trees G30, G31, T139 field maple and T140 ash and Category C trees T136, T137, T138 and T141 ash.	Mico siting Temporary Construction Accesses outside of RPAs of these trees to prevent soil compaction.
	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	Sensitive design of trenchless crossings entry/exit point locations away from trees.

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

106. 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.
107. Nevertheless, without any mitigation several potential impacts to veteran trees and the ancient woodland W₁ have been identified in this assessment. These are:
- A small incursion (up to 1m inside the 15m Veteran Tree Buffer Zone) into ancient woodland W₁ will be required to facilitate earthworks needed to create a drainage basin for the Onshore Converter Stations;
 - Root impacts within the Veteran Tree Buffer Zone of veteran tree T₁₄₂ ash from the installation of a Temporary Construction Compound near the tree;
 - Minor incursion into the Veteran Tree Buffer Zone of T₀₇₆ ash for an indicative off route access; and
 - Root and/or canopy impacts to veteran tree T₁₅₀ ash should the working corridor for open cut trenching be located near the tree.
108. Impacts to veteran and ancient trees must be avoided as a priority given these trees' 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)

- 109. 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.
- 110. 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].
- 111. 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.
- 112. 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

- 113. 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.
- 114. 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.
- 115. 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

116. 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.
117. 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)
118. The tree survey recorded 256 individual trees, 53 group of trees and three woodlands. These included nine veteran trees: T040 ash, T076 ash, T078 ash, T099 ash, T111 ash, T142 ash, T150 ash, T252 ash and T253 oak. One ancient woodland (W1) was also recorded at the Onshore Substation Zone.
119. 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 Tree Constraints Plan 3 of 27 in Appendix 4.
120. 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.
121. 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

122. 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); and
 - Soil compaction from vehicle or pedestrian movements within RPAs or piling of materials (such as spoil) within RPAs.
123. 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.
124. 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
 - 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.
125. 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

126. The final Arboricultural Method Statement will be based on this Outline Arboricultural Method Statement (OAMS) and be presented to all personnel, visitors and sub-contractors involved with Onshore Development Area construction activities.

- 127. 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.
- 128. 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

- 129. **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.

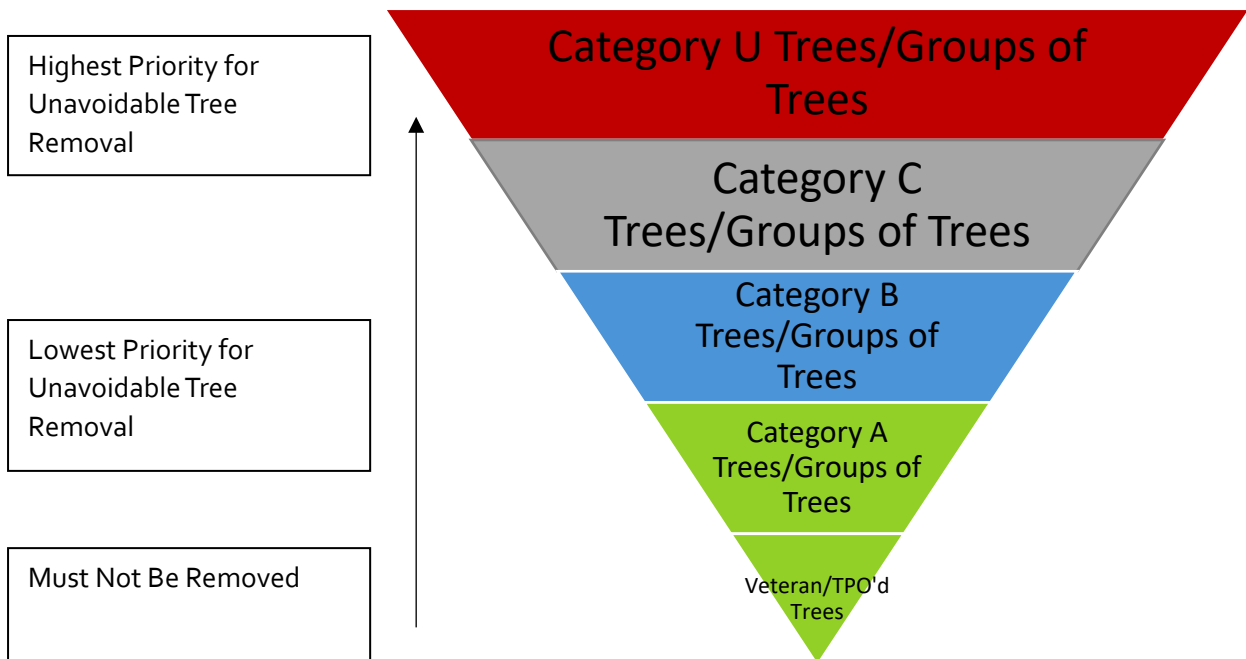


Plate 6-1 Principle 1

130. **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.
131. **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

132. The following trees will be removed prior to construction works commencing:
- Category A trees: T012 oak, T019 oak and T021 oak;
 - Category B trees: T016 sycamore, T018 sycamore, T020 oak, T023 oak, T189 crab apple, T246 sycamore, part of G01 (approximately 160m) and G12;
 - Category C trees: T005 sycamore, T009 ash, T011 sycamore, T013 sycamore, T014 sycamore, T015 ash, T022 ash, T096 goat willow, T097 goat willow, T098 horse chestnut, T188 ash, G02 (partial removal), G03, G04 and G06; and
 - Category U trees: G05 and T017 sycamore.
133. All the above trees are shown for removal in the Preliminary Tree Impact Plans and are required for the construction of Temporary Construction Accesses, Temporary Construction Compounds and the Onshore Substation Zone including the Converter Stations and their associated permanent access road, drainage basin (SuDs) and earthworks.
134. 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.
135. 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

136. No tree specific tree pruning was found to be required in the Preliminary Arboricultural Impact Assessment. Nevertheless, tree pruning may 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).
137. 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**.
138. 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 to do so.

6.2.5 Legal Restrictions on Tree Removal and Tree Pruning

139. 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

140. 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

141. 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.
142. 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

143. 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].
144. 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 **Tree Constraints Plan 3 of 27 in Appendix 4**. Please note that new TPOs may be made and confirmed between September 2024 and construction concluding.
145. 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.
146. 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.
147. 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

148. 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)

149. TTPF will be installed prior to any construction works commencing at the Onshore Substation Zone.

- 150. 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.
- 151. 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.
- 152. Signage will be attached regularly to Heras fencing panels that reads '*Tree Protection Zone –Keep Out*'.

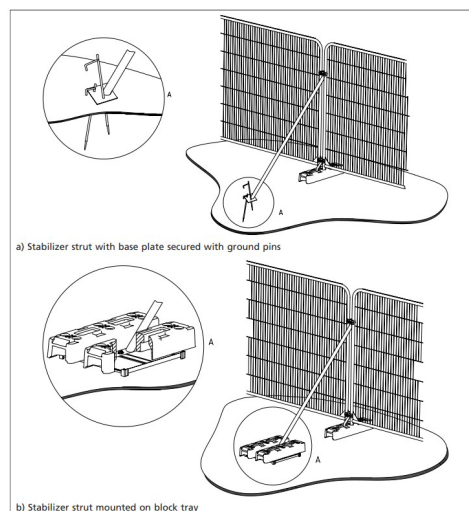


Plate 6-2 Temporary Tree Protection Fencing Specification as per BS5837: 2012

- 153. 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.
- 154. 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.
- 155. 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.

156. 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.
157. TTPF will only be removed once all construction and landscaping work is complete.

6.2.6.2 Ground Protection

158. 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.
159. 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.
160. 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."*
161. 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.
162. 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: Earthworks

163. Earthworks for the drainage basin will avoid the RPA of Category A tree T039 oak and the Veteran Tree Buffer Zone of woodland W1 which is an ancient woodland.

164. TTPF will need to be installed at the To39 oak's RPA and W1's Veteran Tree Buffer Zone prior to works commencing. Dust mitigation must be installed in conjunction with the TTPF to prevent dust affecting the ancient woodland. As per section 6.8.2.1 of the **Outline Construction Code of Practice** [APP-234] dust mitigation will comprise "*solid screens or barriers around dusty activities*" as well as other precautionary working methods detailed in that section. Once these protection measures are installed, the ACoW will check the measures and provide sign-off for earthworks to commence.
165. All machinery required for the earthworks will operate from outside CEZs. Spoil will be stored outside CEZs.

6.2.8 Onshore Substation Zone: Drainage Connections

166. The drainage connection around the Converter Stations to the drainage basin will avoid the RPA of Category A tree To24 oak in order to avoid significant root damage and loss to this high-quality tree.
167. The RPA radius for To24 oak is 13.3m. All works to install the drainage connection will take place more than 13.3m from the stem of To24 oak. To24 oak must be protected by TTPF during the works to ensure its RPA is a CEZ.
168. Once drainage connection works are complete, the trench will be refilled and TTPF reinstated to the edge of the To24 oak's RPA.
169. These precautionary working methods are in accordance with National Joint Utilities Guidelines Volume 4 [Ref.4].

6.2.9 Onshore Substation Zone: Construction of Permanent Access Roads

170. Tree removal to facilitate the permanent access road to the Converter Stations has already been included in the tree removals listed in section 6.2.3 of this OAMS.
171. Tree pruning to the retained sections of Go1 and to Wo2 may be required. All tree pruning must follow the precautionary working methods described in sections 6.2.4 and 6.2.5 above.

6.2.10 Onshore Export Cable Corridor: Open Cut Trenching

172. 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.
173. 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.

174. 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.
175. Prior to excavation near trees, TTPF will be set back to the edge of the working area to create a CEZ around the trees. 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.
176. 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).
177. Once the Onshore Export Cables are laid and works have ceased in the area, TTPF and ground protection may be removed.

6.2.11 Onshore Export Cable Corridor: Trenchless Crossings

178. 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.
179. The entry and exit points for trenchless crossing e.g. HDD must be located outside the RPAs of retained trees.
180. 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.
181. Once all trenchless crossing e.g. HDD machinery is removed from an area, only then can TTPF be removed.

6.2.12 Onshore Export Cable Corridor: Machinery Movements

182. Prior to construction machinery/vehicles entering an area with retained arboricultural features, TTPF will be installed.
183. In particular, T150 veteran ash must be protected with TTPF prior to works commencing in the vicinity of this tree.

184. 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.

6.2.13 Onshore Export Cable Corridor: Spoil Storage

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

6.2.14 Onshore Export Cable Corridor: Temporary Construction Accesses

186. 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.
187. 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.
188. The Preliminary Arboricultural Impact Assessment found that a Temporary Construction Access is proposed within the Veteran Tree Buffer Zone of T076, a veteran ash tree. T076's Veteran Tree Buffer Zone has a radius of 13.5m. T076 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 T076.
189. Similarly, a Temporary Construction Access is proposed adjacent to G30 and G31, veteran ash tree T099 and trees T136-T141. 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.
190. 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.

6.2.15 Onshore Export Cable Corridor: Temporary Construction Compounds (TCC)

191. 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.

192. 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.

6.2.16 Onshore Export Cable Corridor: Highway Works

193. 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.
194. 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 highway 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.

6.2.17 Compensatory Tree Planting

195. 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.
196. 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.
197. 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.

6.2.18 Arboricultural Monitoring and Supervision

198. 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.

199. 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.
200. 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.
201. 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

Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	Canopy Spread (m)				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)
					N	E	S	W												
G01	Hawthorn, Ash, Oak, Elder, Sycamore, Goat Willow, Blackthorn, Silver Birch	<i>Crateagus monogyna, Fraxinus excelsior, Quercus robur, Sambucus nigra, Acer pseudoplatanus, Salix caprea, Prunus spinosa, Betula pendula</i>	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+	B3	163	7.2	No	
G02	Hazel, Oak, Hawthorn, Sycamore	<i>Corylus avellana, Quercus robur, Crataegus monogyna, Acer pseudoplatanus</i>	6	~ 320	3	3	3	3	Semi mature	Group comprised of young and semi-mature Oak with Hazel	0		Fair	Good	40+	C3	46	3.8	No	
G03	Ash, Sycamore	<i>Fraxinus excelsior, Acer pseudoplatanus</i>	8	200	4	4	4	4	Young	6 ash, 1 sycamore all multi stem			Fair	Good	40+	C2	18	2.4	No	
G04	Sycamore, Blackthorn	<i>Acer pseudoplatanus, Prunus spinosa</i>	7.5	150	2.5	2.5	2.5	2.5	Semi mature	Scrubby group of blackthorn with self-seeded sycamore	0		Good	Good	40+	C3	10	1.8	No	
G05	Sycamore	<i>Acer pseudoplatanus</i>	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	
G06	Elm	<i>Ulmus sp(p)</i>	5	100	2	2	2	2	Young				Fair	Good	10-20	C2	5	1.2	No	
G07	Larch, Oak, Hawthorn, Blackthorn, Ash, Wild cherry, Scots pine	<i>Larix decidua, Quercus robur, Crataegus monogyna, Prunus spinosa, Fraxinus excelsior, Prunus avium, Pinus sylvestris</i>	17.5	~ 400				3.5	Semi mature	Belt of trees along road embankment, semi-early mature			Good	Good	40+	B2	72	4.8	No	
G08	Hawthorn, Blackthorn, Holly	<i>Crateagus monogyna, Prunus spinosa, Ilex aquifolium</i>	8.5	~ 350	2	4	4	4	Mature	Scattered trees along boundary	0		Good	Good	40+	B3	55	4.2	No	
G09	Horse Chestnut,	<i>Aesculus hippocastanum, Fraxinus excelsior,</i>	11.5	~ 530	2.5	3.5	5	3	Semi mature				Good	Good	40+	B3	127	6.4	No	

Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	Canopy Spread (m)				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 (m ²)	Radius of RPA (m)	Veteran or Ancient?	Veteran Tree Buffer Radius (m)
					N	E	S	W												
	Ash, Hawthorn	<i>Crataegus monogyna</i>																		
G10	Blackthorn, Elder, Hawthorn, Hazel	<i>Prunus spinosa</i> , <i>Sambucus nigra</i> , <i>Crataegus monogyna</i> , <i>Corylus avellana</i>	8	300		3			Early mature			Good	Good	40+	B ₃	41	3.6	No		
G11	Hawthorn, Elder	<i>Crataegus monogyna</i> , <i>Sambucus nigra</i>	7.5	250	3	3	2	3.5	Mature			Good	Good	40+	B ₃	28	3.0	No		
G12	Oak, Sycamore	<i>Quercus robur</i> , <i>Acer pseudoplatanus</i>	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+	B ₂	104	5.8	No		
G13	Wild Cherry, Hawthorn, Scots Pine, Ash	<i>Prunus avium</i> , <i>Crataegus monogyna</i> , <i>Pinus sylvestris</i> , <i>Fraxinus excelsior</i>	5.5	148	3	3	3	3	Young			Good	Good	40+	C ₃	10	1.8	No		
G14	Leylandii	<i>x Cuprocypris leylandii</i>	6	240	4	4	4	4	Semi mature	Mix of golden and normal leylandii		Good	Good	40+	C ₂	26	2.9	No		
G15	Horse Chesnut, Ash, Hawthorn, Hazel, Goat Willow, Wild Cherry, Cherry Plum, Blackthorn, Silver Birch, Holly, Elder	<i>Aesculus hippocastanum</i> , <i>Fraxinus excelsior</i> , <i>Crataegus monogyna</i> , <i>Corylus avellana</i> , <i>Salix caprea</i> , <i>Prunus avium</i> , <i>Prunus cerasifera</i> , <i>Prunus spinosa</i> , <i>Betula pendula</i> , <i>Ilex aquifolium</i> , <i>Sambucus nigra</i>	9	340	4	4	4	4	Semi mature	Scattered trees and brambles		Good	Good	40+	B ₃	52	4.1	No		
G16	Ash	<i>Fraxinus excelsior</i>	8.5	230	4.5	4.5	3.5	3	Semi mature		1	Fair	Fair	10-20	C ₂	24	2.8	No		
G17	Silver Birch, Willow, Hawthorn, Beech, Oak	<i>Betula pendula</i> , <i>Salix sp</i> , <i>Crataegus monogyna</i> , <i>Fagus sylvatica</i> , <i>Quercus robur</i>	5.5	200	3.5	3.5	3.5	3.5	Young	Newly planted trees		Good	Good	40+	C ₃	18	2.4	No		

Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	Canopy Spread (m)				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 (m ²)	Radius of RPA (m)	Veteran or Ancient?	Veteran Tree Buffer Radius (m)
					N	E	S	W												
G18	Hawthorn, Ash, Sycamore, Leylandii, Lawsons Cypress, Hazel	<i>Crataegus monogyna</i> , <i>Fraxinus excelsior</i> , <i>Acer pseudoplatanus</i> , x <i>Cuprocyparis leylandii</i> , <i>Cupressus x leylandii</i>	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	<i>Acer campestre</i> , <i>Ulmus procera</i> , <i>Prunus spinosa</i>	13.5	360	~ 6	~ 6	~ 6	~ 6	Mature		1		Good	Good	40+	B3	59	4.3	No	
G20	Sycamore	<i>Acer pseudoplatanus</i>	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	<i>Betula pendula</i> , <i>Acer campestre</i> , <i>Crataegus monogyna</i> , <i>Sambucus nigra</i>	9	~ 450	4.5				Mature	Uncut hedgerow	0		Good	Good	40+	B3	92	5.4	No	
G22	Elder	<i>Sambucus nigra</i>	5	240	3	3	3	3	Mature		0.5		Fair	Good	20-40	C2	26	2.9	No	
G23*	Sycamore, Beech	<i>Acer pseudoplatanus</i> , <i>Fagus sylvatica</i>	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+	B2	366	10.8	No	
G24*	Hawthorn	<i>Crataegus monogyna</i>	9	242		4.5			Mature		1		Good	Good	40+	B3	26	2.9	No	
G25*	Hawthorn, Oak, Sycamore, Leylandii, Ash, Black pine, Lime	<i>Crataegus monogyna</i> , <i>Quercus robur</i> , <i>Acer pseudoplatanus</i> , x <i>Cuprocyparis leylandii</i> , <i>Fraxinus excelsior</i> , <i>Pinus nigra</i> , <i>Tilia sp.</i>	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	<i>Acer psueoplatanus</i> , <i>Prunus spinosa</i> , <i>Crataegus monogyna</i>	7	671			7		Early mature				Good	Good	40+	B3	204	8.1	No	
G27	Hazel, Elder, Blackthorn, Hawthorn	<i>Corylus avellana</i> , <i>Sambucus nigra</i> , <i>Prunus spinosa</i> , <i>Crataegus monogyna</i>	~ 6	300	2.5		3.5		Semi mature	A double hedgerow			Good	Good	40+	B3	41	3.6	No	

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					N	E	S	W												
G28	Blackthorn, Elder	<i>Prunus spinosa, Sambucus nigra</i>	4.5	75	2	2	2	2	Young	Patchy shrubs around hawthorn	0		Good	Good	40+	C2	3	0.9	No	
G29	Hawthorn, Blackthorn	<i>Crataegus monogyna, Prunus spinosa</i>	~ 5	150	3	3	3	3	Semi mature	Gappy uncut hedge			Good	Good	40+	B3	10	1.8	No	
G30	Ash, Hawthorn	<i>Fraxinus excelsior, Crataegus monogyna</i>	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	<i>Pinus nigra, Fraxinus excelsior, Crataegus monogyna, Fagus sylvatica, Acer pseudoplatanus</i>	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	B3	358	10.7	No	
G32	Ash, Hawthorn, Horse Chestnut, Elm	<i>Fraxinus excelsior, Crataegus monogyna, Aesculus hippocastanum, Ulmus sp.</i>	7	200	2	2	2	~ 2	Young				Good	Good	40+	C2	18	2.4	No	
G33	Horse Chestnut, Hawthorn, Elder, Ash, Elm	<i>Aesculus hippocastanum, Crataegus monogyna, Sambucus nigra, Fraxinus excelsior, Ulmus sp.</i>	8.5	300	4	4	4	4	Semi mature		0		Good	Good	40+	B3	41	3.6	No	
G34	Wild Cherry	<i>Prunus avium</i>	5	75	1	1	1	1	Young		0		Good	Good	20-40	C2	3	0.9	No	
G35	Hawthorn	<i>Crataegus monogyna</i>	7	259	4	2	4	2	Mature	Scattered hawthorn outgrown hedge	0		Good	Good	40+	C2	30	3.1	No	
G36	Hawthorn	<i>Crataegus monogyna</i>	7	~ 335	3.5	2	3.5	2	Early mature	Hawthorn growing between Ash trees	0		Good	Good	40+	C2	51	4.0	No	
G37	Elm, Field maple, Ash, Hawthorn	<i>Ulmus sp(p), Acer campestre, Fraxinus excelsior, Crataegus monogyna</i>	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	
G38	Ash, Oak, Hawthorn	<i>Fraxinus excelsior, Quercus robur,</i>	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	

Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	Canopy Spread (m)				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)
					N	E	S	W												
		<i>Crataegus monogyna</i>							and Hawthorn hedge											
G39	Hawthorn	<i>Crataegus monogyna</i>	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	<i>Crataegus monogyna, Acer pseudoplatanus, Prunus spinosa, Sambucus nigra</i>	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	<i>Fagus sylvatica, Prunus spinosa</i>	10	350	6	6	6	6	Semi mature	Trees beyond hedge	0		Good	Good	40+	B2	55	4.2	No	
G42	Hawthorn Elder	<i>Crataegus monogyna, Sambucus nigra</i>	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	<i>Acer pseudoplatanus, Ulmus sp., Crataegus monogyna</i>	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	<i>Crataegus monogyna, Prunus spinosa</i>	6.5	300	3	3	3	3	Early mature	Hedge	0		Good	Good	40+	B2	41	3.6	No	
G45	Hawthorn, Blackthorn	<i>Crataegus monogyna, Prunus spinosa</i>	6.5	395	3	3	3	3	Mature	Hawthorn hedge dividing fields			Good	Good	40+	B2	71	4.7	No	
G46	Hawthorn, Blackthorn, Elder, Field Maple, Crab Apple	<i>Crataegus monogyna, Prunus spinosa, Sambucus nigra, Acer campestre, Malus sylvestris</i>	8	260	4	4	4	4	Mature	Mature uncut hedge mixed with trees	0		Good	Good	40+	B2	31	3.1	No	
G47	Hawthorn	<i>Crataegus monogyna</i>	6	200	2	2	2	2	Mature		0		Good	Good	40+	C2	18	2.4	No	
G48	Hawthorn	<i>Crataegus monogyna</i>	5.5	250	3	3	3	3	Mature		0		Fair	Good	40+	C2	28	3.0	No	
G49	Ash, Hawthorn, Blackthorn	<i>Fraxinus excelsior, Crataegus monogyna, Prunus spinosa</i>	10.5	300	5	5	5	5	Semi mature	12 Ash growing inside hedge	0		Fair	Fair	20-40	C2	41	3.6	No	

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					N	E	S	W												
G50	Ash, Hawthorn, Blackthorn	<i>Fraxinus excelsior, Crataegus monogyna, Prunus spinosa</i>	10.5	300	5	5	5	5	Semi mature	8 Ash growing inside hedge			Fair	Fair	20-40	C2	41	3.6	No	
G51	Hawthorn, Blackthorn	<i>Crataegus monogyna, Prunus spinosa</i>	6.5	200	3	1.5	3	1.5	Semi mature	Hedge	0		Good	Good	40+	C2	18	2.4	No	
G52	Hawthorn, Blackthorn	<i>Crataegus monogyna, Prunus spinosa</i>	6.5	180	3	3	3	3	Early mature		0		Good	Good	40+	C2	15	2.2	No	
G53	Sycamore, Oak, Cherry, Ash	<i>Prunus avium, Fraxinus excelsior</i>	12.5	280	4	4	4	4	Semi mature		0		Good	Good	40+	B2	35	3.4	No	
T001	Oak	<i>Quercus robur</i>	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	<i>Quercus robur</i>	10	~ 400	5.7	5	5.5	5	Semi mature		2.5	E1.5	Good	Good	40+	B2	72	4.8	No	
T003	Sycamore	<i>Acer pseudoplatanus</i>	15	790	~ 6.5	6	6.5	6.5	Early mature	Tight fork with cup union, minor ivy	4	SW4	Fair	Good	40+	B2	282	9.5	No	
T004	Sycamore	<i>Acer pseudoplatanus</i>	8	~ 484	4	4	3	3	Young	Tight union at base	1	So.5	Fair	Good	40+	C2	106	5.8	No	
T005	Sycamore	<i>Acer pseudoplatanus</i>	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	
T006	Ash	<i>Fraxinus excelsior</i>	11	572	7	7.5	7	7	Early mature	Multi stem at base	3	NE2	Fair	Fair	10-20	C2	148	6.9	No	
T007	Sycamore	<i>Acer pseudoplatanus</i>	13	546	6	6	5	2	Early mature	Two trees, cankers and dysfunctional bark, multi stem at base	4	N3.5	Fair	Poor	<10	U	135	6.6	No	
T008	Sycamore	<i>Acer pseudoplatanus</i>	7	155	2	2	2	2	Young		4	N1.5	Fair	Good	40+	C2	11	1.9	No	
T009	Ash	<i>Fraxinus excelsior</i>	6.5	250	5	~ 5	~ 5	~ 5	Young	Multi stem at base	1.5	E2	Fair	Good	20-40	C2	28	3.0	No	
T010	Sycamore	<i>Acer pseudoplatanus</i>	6	167	3	3	3	3	Young	Multi stem at base			Fair	Good	40+	C2	13	2.0	No	

Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	Canopy Spread (m)				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 (m ²)	Radius of RPA (m)	Veteran or Ancient?	Veteran Tree Buffer Radius (m)
					N	E	S	W												
To11	Sycamore	<i>Acer pseudoplatanus</i>	8	244	4.5	4.5	4.5	2	Young	Multi stem at base	1		Fair	Good	20-40	C ₂	27	2.9	No	
To12	Common oak and hybrid turkey oak	<i>Quercus robur and Quercus cerris</i>	12	1100	7.5	7.6	9	7.5	Mature	On north side of ditch	1	W2	Good	Good	40+	A ₂	547	13.2	No	
To13	Sycamore	<i>Acer pseudoplatanus</i>	6.5	167	2	2	2	2	Young	Multi stem at base	0		Fair	Good	40+	C ₂	13	2.0	No	
To14	Sycamore	<i>Acer pseudoplatanus</i>	4	150	2	2	2	2	Young	Multi stem at base	0		Fair	Good	40+	C ₂	10	1.8	No	
To15	Ash	<i>Fraxinus excelsior</i>	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	C ₂	452	12.0	No	
To16	Sycamore	<i>Acer pseudoplatanus</i>	14	~ 550	5.5	5.5	5.5	1	Early mature		0	E0.5	Good	Good	40+	B ₂	137	6.6	No	
To17	Sycamore	<i>Acer pseudoplatanus</i>	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	<i>Acer pseudoplatanus</i>	13	600	5.5	6	4.5	~ 4.5	Early mature	Multi stem at base, some tight forks	1.5		Fair	Good	40+	B ₂	163	7.2	No	
To19	Oak	<i>Quercus robur</i>	11	720	5	6	7.5	7	Early mature	Dead branches in crown, cavities, high wildlife value	2	S ₄	Fair	Good	40+	A ₃	235	8.6	No	
To20	Oak	<i>Quercus robur</i>	10.5	~ 500	9	8	7.5	7.5	Early mature	Dead former leader branch retained in crown	3	NE ₃	Good	Good	40+	B ₂	113	6.0	No	
To21	Oak	<i>Quercus robur</i>	15	950	10	10	10	11	Early mature	Raptor bird box installed on tree	5	N ₅	Good	Good	40+	A ₂	408	11.4	No	
To22	Ash	<i>Fraxinus excelsior</i>	6.5	282	3	2	2	1	Early mature	Flailed at 1m height and then regrown			Poor	Fair	20-40	C ₂	36	3.4	No	
To23	Oak	<i>Quercus robur</i>	8	750	7	6	6	5.5	Early mature	Major ivy cladding, stag headed, some deadwood in crown	3	N ₂	N/A	Good	40+	B ₃	254	9.0	No	
To24	Oak	<i>Quercus robur</i>	13.5	1110	9	9	10	9	Mature	Moderate ivy coverage, narrow	4	S ₄	Fair	Fair	40+	A ₂	557	13.3	No	

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					N	E	S	W												
									cavity at base on east side, standing deadwood											
To25	Oak	<i>Quercus robur</i>	7	~ 200	2.5	2.5	2.5	2.5	Young		3	E2.5	Good	Good	40+	C2	18	2.4	No	
To26	Oak	<i>Quercus robur</i>	9.5	900	7.5	8	7.5	6	Early mature	Hazard beam features, large dead branches, stag headed, moderate ivy coverage	4	S4	Good	Fair	40+	B3	366	10.8	No	
To27	Field maple	<i>Acer campestre</i>	9.5	855	6.5	6	6.5	6	Mature	Multi stem at base, moderate ivy coverage	4	N1	Fair	Good	40+	B3	331	10.3	No	
To28	Field maple	<i>Acer campestre</i>	6.5	264	2.5	2	2.5	2	Early mature		4		Fair	Good	40+	C2	32	3.2	No	
To29	Field maple	<i>Acer campestre</i>	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	<i>Acer campestre</i>	6.5	244	2.5	2	2.5	2	Early mature		4		Fair	Good	40+	C2	27	2.9	No	
To31	Ash	<i>Fraxinus excelsior</i>	7	282	3	2.5	3	2.5	Semi mature		4		Fair	Good	20-40	C2	36	3.4	No	
To32	Ash	<i>Fraxinus excelsior</i>	7	264	2.5	2	2.5	2	Semi mature		4		Fair	Good	20-40	C2	32	3.2	No	
To33	Oak	<i>Quercus robur</i>	6.5	180	2	1.5	2	1.5	Young		4	N3	Fair	Good	40+	C2	15	2.2	No	
To34	Oak	<i>Quercus robur</i>	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+	B3	461	12.1	No	
To35	Oak	<i>Quercus robur</i>	17	1160	10	15	9.5	7	Mature	Cavity at base on west side, deadwood in crown	3	SE5	Fair	Good	40+	A2	609	13.9	No	
To36	Oak	<i>Quercus robur</i>	13	750	7	9	6.5	7	Early mature		4	NE3	Good	Good	40+	A2	254	9.0	No	

Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	Canopy Spread (m)				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 (m ²)	Radius of RPA (m)	Veteran or Ancient?	Veteran Tree Buffer Radius (m)
					N	E	S	W												
To37	Oak	<i>Quercus robur</i>	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+	A3	651	14.4	No	
To38	Oak	<i>Quercus robur</i>	14	1400	11	10	9	9	Mature	Lightening strike feature on main scaffold, bat potential	2	SE3	Fair	Good	40+	A3	707	15.0	No	
To39	Oak	<i>Quercus robur</i>	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	
To40	Ash	<i>Fraxinus excelsior</i>	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	A3	408	11.4	Yes	14.3
To41	Oak	<i>Quercus robur</i>	11.5	730	6	8	7.5	6.5	Early mature	Two big cavities on northside of stem	1	E2	Fair	Good	40+	B3	241	8.8	No	
To42	Oak	<i>Quercus robur</i>	16	780	5.5	6	7.5	9	Early mature	Previous pruning and crown lifting on east side	0.5	N3	Good	Good	40+	B2	275	9.4	No	
To43	Ash	<i>Fraxinus excelsior</i>	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	
To44	Ash	<i>Fraxinus excelsior</i>	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	<i>Crataegus monogyna</i>	5.5	287	3	2.5	3.5	4	Semi mature		0		Good	Good	40+	C2	37	3.4	No	
To46	Hawthorn	<i>Crataegus monogyna</i>	5.5	150	2	2.5	3	3.5	Semi mature		0		Good	Good	40+	C2	10	1.8	No	
To47	Pear	<i>Pyrus domestica</i>	14.5	640	5	5	5	4	Mature	Deep cavity on east side of stem, with potential to	2	S2	Good	Good	40+	B2	185	7.7	No	

Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	Canopy Spread (m)				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)
					N	E	S	W												
									support roosting bats											
To48	Hawthorn	<i>Crataegus monogyna</i>	4.5	335	2	2	2	2	Mature		1.5		Good	Good	40+	C2	51	4.0	No	
To49	Hawthorn	<i>Crataegus monogyna</i>	3.5	~ 350	0	3	4	3	Mature		1.5		Good	Good	40+	C2	55	4.2	No	
To50	Hawthorn	<i>Crataegus monogyna</i>	6	259	5	4	~ 3	4	Mature		0		Good	Good	40+	C2	30	3.1	No	
To51	Ash	<i>Fraxinus excelsior</i>	11.5	290	3.5	2.5	3.5	4	Semi mature		1.5	W2.5	Good	Good	40+	B2	38	3.5	No	
To52	Oak	<i>Quercus robur</i>	10	579	5	5	7	7	Semi mature		2	S2	Good	Good	40+	B2	152	6.9	No	
To53	Oak	<i>Quercus robur</i>	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	<i>Quercus robur</i>	8	~ 670	5	5	6	6	Semi mature	Multi stem at 1m	2.5	S1	Good	Good	40+	B2	203	8.0	No	
To55	Oak	<i>Quercus robur</i>	13.5	~ 707	5.5	7.5	8	6	Early mature	Twin stem at 1.5m	3	S2	Good	Good	40+	B2	226	8.5	No	
To56	Oak	<i>Quercus robur</i>	9.5	~ 480	5	4.5	4	5	Semi mature		4	W2	Good	Good	40+	B2	104	5.8	No	
To57	Oak	<i>Quercus robur</i>	14.5	671	4	8	8	7	Early mature	Twin stem tight fork	2	S2.5	Fair	Good	40+	B2	204	8.1	No	
To58	Oak	<i>Quercus robur</i>	12.5	671	5.5	5.5	3	10	Early mature		2	SW1	Good	Good	40+	B2	204	8.1	No	
To59	Elder	<i>Sambucus nigra</i>	4.5	129	2.5	2.5	2.5	2.5	Mature		1		Good	Good	20-40	C2	8	1.5	No	
To60	Elder	<i>Sambucus nigra</i>	3.5	129	2.5	2.5	2.5	2.5	Mature		0.5		Good	Good	20-40	C2	8	1.5	No	
To61	Hawthorn	<i>Crataegus monogyna</i>	4	212	2	3	3	2.5	Semi mature		1		Good	Good	40+	C2	20	2.5	No	
To62	Hawthorn	<i>Crataegus monogyna</i>	5	346	2.5	2.5	0.5	1.5	Semi mature		1		Good	Good	40+	C2	54	4.2	No	
To63	Hawthorn	<i>Crataegus monogyna</i>	6.5	346	4.5	4.5	4.5	4.5	Mature		1		Good	Good	40+	C2	54	4.2	No	

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					N	E	S	W												
To64	Hawthorn	<i>Crataegus monogyna</i>	5	~ 300	2	2	2	2	Semi mature	No stem access	1		Good	Good	40+	C2	41	3.6	No	
To65	Hawthorn	<i>Crataegus monogyna</i>	5	~ 300	2	2	2	2	Semi mature	No stem access	1		Good	Good	40+	C2	41	3.6	No	
To66	Ash	<i>Fraxinus excelsior</i>	8.5	210	4	4	3	3	Semi mature	Signs of ash dieback, lesion present on stem	2.5	SE2	Fair	Fair	10-20	C2	20	2.5	No	
To67	Ash	<i>Fraxinus excelsior</i>	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	<i>Fraxinus excelsior</i>	3	75	2	2	2	2	Dead	Dead tree	0.5		Poor	Poor	<10	U	3	0.9	No	
To69	Hazel	<i>Corylus avellana</i>	4.5	158	4	4	0	2.5	Semi mature				Fair	Good	40+	C2	11	1.9	No	
To70	Hazel	<i>Corylus avellana</i>	4.5	189	4	3.5	1	3	Semi mature		0		Fair	Good	40+	C2	16	2.3	No	
To71	Ash	<i>Fraxinus excelsior</i>	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	
To72	Ash	<i>Fraxinus excelsior</i>	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	<i>Chamaecyparis lawsoniana</i>	4	130	1.5	2	2	0	Semi mature	Lost top	0		Poor	Fair	10-20	C2	8	1.6	No	
To74	Ash	<i>Fraxinus excelsior</i>	9.5	240	3.5	3	4	3	Semi mature		3	NW2.5	Fair	Fair	10-20	C2	26	2.9	No	
To75	Ash	<i>Fraxinus excelsior</i>	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	N7	Poor	Poor	<10	U	327	10.2	No	
To76	Ash	<i>Fraxinus excelsior</i>	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	S3.5	Poor	Fair	20-40	A3	366	10.8	Yes	13.5

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					N	E	S	W												
									and branches, top retrenching, good lower crown with abundant epicormic growth											
To77	Ash	<i>Fraxinus excelsior</i>	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	<i>Fraxinus excelsior</i>	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	A3	222	8.4	Yes	10.5
To79	Oak	<i>Quercus robur</i>	9.5	420	5	5.5	5.5	6	Semi mature		1.5	W2.5	Good	Good	40+	B2	80	5.0	No	
To80	Oak	<i>Quercus robur</i>	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	<i>Salix caprea</i>	4	84	1.5	1.5	1.5	1.5	Young	Growing inside pond	1		Good	Good	40+	C2	3	1.0	No	
To82	Sycamore	<i>Acer pseudoplatanus</i>	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	<i>Acer pseudoplatanus</i>	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	<i>Sambucus nigra</i>	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	<i>Acer pseudoplatanus</i>	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	<i>Salix caprea</i>	13.5	720	7	7	6.5	6.5	Mature	Multi stem at base	1		Fair	Fair	20-40	C2	235	8.6	No	
To87	Ash	<i>Fraxinus excelsior</i>	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	
To88	Sycamore	<i>Acer pseudoplatanus</i>	13	537	5	~ 4	5	5	Semi mature	Multi stem at base, 1 dead stem,	1	S2	Fair	Good	20-40	B2	130	6.4	No	

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					N	E	S	W												
To89	Sycamore	<i>Acer pseudoplatanus</i>	10.5	497	4.5	4.5	6	3.5	Semi mature	Ivy on main stem	1.5	S1.5	Fair	Fair	20-40	B2	112	6.0	No	
To90	Turkey oak	<i>Quercus cerris</i>	10	280	4.5	4.5	4.5	4.5	Semi mature		1	NE2	Good	Good	40+	B1	35	3.4	No	
To91*	Ash	<i>Fraxinus excelsior</i>	13	290	5	7	5	~ 2.5	Semi mature	Suppressed by other trees, ivy on main stem, canopy biased towards the east	2	E3	Fair	Fair	20-40	C2	38	3.5	No	
To92	Hawthorn	<i>Crataegus monogyna</i>	5	~ 200	4	4	4	4	Semi mature		0		Good	Good	40+	C2	18	2.4	No	
To93	Blackthorn	<i>Prunus spinosa</i>	5.5	~ 250	2.5	3	3	3	Semi mature		0		Good	Good	20-40	C2	28	3.0	No	
To94	Hawthorn	<i>Crataegus monogyna</i>	5	~ 200	4	4	4	~ 4	Early mature		0		Good	Good	40+	C2	18	2.4	No	
To95	Hawthorn	<i>Crataegus monogyna</i>	6.5	433	4.5	4.5	4.5	4.5	Mature		0		Good	Good	40+	C2	85	5.2	No	
To96	Goat willow	<i>Salix caprea</i>	8.5	447	3.5	5.5	5	5	Semi mature		1	E0.5	Fair	Good	40+	C2	90	5.4	No	
To97	Goat willow	<i>Salix caprea</i>	~ 8.5	277	4.5	4.5	0	3	Semi mature	Canopy suppressed by T96	0.5	No.5	Fair	Good	40+	C2	35	3.3	No	
To98	Horse Chestnut	<i>Aesculus hippocastanum</i>	6.5	346	4.5	5	4.5	4.5	Semi mature	Tight fork union, twin stem	1	E1	Fair	Good	40+	C2	54	4.2	No	
To99	Ash	<i>Fraxinus excelsior</i>	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	<i>Fraxinus excelsior</i>	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	<i>Populus nigra 'Italica'</i>	20.5	~ 800	2.5	2.5	2.5	2.5	Mature	Ivy on main stem	3		Good	Good	20-40	B2	290	9.6	No	
T102	Hawthorn	<i>Crataegus monogyna</i>	5	259	4	4	5	2	Early mature		0		Good	Good	40+	C2	30	3.1	No	

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					N	E	S	W												
T103	Hawthorn	<i>Crataegus monogyna</i>	5.5	245	3.5	2	2.5	2	Early mature		0		Good	Good	40+	C2	27	2.9	No	
T104	Ash	<i>Fraxinus excelsior</i>	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	<i>Fraxinus excelsior</i>	14.5	~ 750	7	7	5.5	5.5	Early mature	Major ivy on main stem, advanced ash dieback	3	S3	N/A	Poor	<10	U	254	9.0	No	
T106	Lombardy Poplar	<i>Populus nigra 'Italica'</i>	25	~ 1000	2	3.5	2	2	Mature		3		Good	Good	20-40	B2	452	12.0	No	
T107	Ash	<i>Fraxinus excelsior</i>	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	<i>Populus nigra 'Italica'</i>	25	~ 1000	2.5	3.5	2.5	2.5	Mature	Ivy on main stem	2		Good	Good	20-40	B2	452	12.0	No	
T109	Lombardy Poplar	<i>Populus nigra 'Italica'</i>	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	<i>Populus sp(p)</i>	25	~ 900	2.5	3.5	2.5	2.5	Mature		3		Good	Good	20-40	B2	366	10.8	No	
T111	Ash	<i>Fraxinus excelsior</i>	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	A3	557	13.3	Yes	16.65
T112	Beech	<i>Fagus sylvatica</i>	17	~ 850	7	4	3	7	Early mature	Unable to access stem	6	W8	Fair	Good	40+	B2	327	10.2	No	
T113	Beech	<i>Fagus sylvatica</i>	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	<i>Fagus sylvatica</i>	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	<i>Aesculus hippocastanum</i>	18.5	880	8	6	7	3.5	Mature	Major cavity on north side of stem	5	W5	Fair	Good	40+	B2	350	10.6	No	

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					N	E	S	W												
T116	Beech	<i>Fagus sylvatica</i>	23	990	8.5	3	9	5.5	Mature	Major historic crown lifting work on north side of stem	1.5	S2	Fair	Good	40+	B2	443	11.9	No	
T117	Horse Chestnut	<i>Aesculus hippocastanum</i>	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	<i>Quercus robur</i>	10	430	6.5	3.5	6	5	Early mature	Twin stem/ 1 stem died off, failed to east side	3	N2	Fair	Good	40+	B3	84	5.2	No	
T119	Oak	<i>Quercus robur</i>	10.5	~ 531	4.5	4.5	5	5	Semi mature	Twin stem at base, failed to east side	3	NW2.5	Good	Good	40+	B3	128	6.4	No	
T120	Oak	<i>Quercus robur</i>	8.5	800	5	3	4	5	Early mature	Stag headed, regenerating crown	3.5	N3.5	Fair	Good	40+	B3	290	9.6	No	
T121	Cherry	<i>Prunus avium</i>	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	<i>Fraxinus excelsior</i>	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	<i>Fraxinus excelsior</i>	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	<i>Fraxinus excelsior</i>	14.5	~ 393	4.5	4	4	4	Semi mature	Multi stem, ash dieback, ivy on main stem	4	S3.5	Fair	Fair	20-40	C2	70	4.7	No	
T125	Ash	<i>Fraxinus excelsior</i>	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	<i>Fraxinus excelsior</i>	12.5	551	3.5	6.5	5	5	Early mature	Ash dieback, multi stem at base	0.5	S1	Fair	Fair	10-20	C2	137	6.6	No	
T127	Ash	<i>Fraxinus excelsior</i>	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	<i>Fraxinus excelsior</i>	12	574	4.5	6	8	6.5	Semi mature	Multi stem at 1.5m height	0.5	S1	Fair	Fair	10-20	C2	149	6.9	No	

Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	Canopy Spread (m)				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)
					N	E	S	W												
T129	Ash	<i>Fraxinus excelsior</i>	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	<i>Fraxinus excelsior</i>	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	<i>Fraxinus excelsior</i>	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	<i>Fraxinus excelsior</i>	12.5	465	3	5	6	3	Semi mature	Multi stem at base, ash dieback suspected	3	S3	Fair	Fair	20-40	C2	98	5.6	No	
T133	Ash	<i>Fraxinus excelsior</i>	12.5	627	7.5	5	5	5	Semi mature	Multi stem at base, tight fork union, small cavity at base	0.5	S1.5	Fair	Fair	20-40	C2	178	7.5	No	
T134	Oak	<i>Quercus robur</i>	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	<i>Fraxinus excelsior</i>	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	<i>Fraxinus excelsior</i>	11.5	360	6	5	6	4	Semi mature	Two dead stems at base, cavity at base, small deadwood in crown	0.5	N3	Fair	Fair	20-40	C2	59	4.3	No	
T137	Ash	<i>Fraxinus excelsior</i>	9	370	5	5	5	5	Semi mature	Some fallen dead wood	3.5	E3.5	Good	Fair	20-40	C2	62	4.4	No	
T138	Ash	<i>Fraxinus excelsior</i>	9	320	5	5	5	5	Semi mature		2	W2	Good	Fair	20-40	C2	46	3.8	No	
T139	Field maple	<i>Acer campestre</i>	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	<i>Fraxinus excelsior</i>	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	<i>Fraxinus excelsior</i>	8	390	5	5	5	5	Semi mature	Three dead stems at base	4	W1	Fair	Fair	20-40	C2	69	4.7	No	

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					N	E	S	W												
T142	Ash	<i>Fraxinus excelsior</i>	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	A3	312	10.0	Yes	12.45
T143	Ash	<i>Fraxinus excelsior</i>	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	<i>Fraxinus excelsior</i>	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	<i>Fraxinus excelsior</i>	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	<i>Fraxinus excelsior</i>	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	<i>Quercus robur</i>	5.5	270	4	4	4	4	Semi mature		1.5	W1.5	Good	Good	40+	C2	33	3.2	No	
T148	Ash	<i>Fraxinus excelsior</i>	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	<i>Aesculus hippocastanum</i>	5	130	2	2	2	2	Young		1.5	W1.5	Good	Good	40+	C2	8	1.6	No	
T150	Ash	<i>Fraxinus excelsior</i>	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	A3	222	8.4	Yes	10.5

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					N	E	S	W												
T151	Ash	<i>Fraxinus excelsior</i>	9	421	4	4	4	4	Semi mature	Muti stem at base, lots of deadwood present in crown	1	W1	Fair	Fair	10-20	C ₂	80	5.1	No	
T152	Ash	<i>Fraxinus excelsior</i>	9.5	380	5	5	5	5	Semi mature	Multi stem at base, growing in dyke	2	N2	Fair	Fair	20-40	C ₂	65	4.6	No	
T153	Ash	<i>Fraxinus excelsior</i>	10	250	6	6	4	4	Semi mature	Broken stem at base, ash dieback suspected	3	W3	Fair	Fair	20-40	C ₂	28	3.0	No	
T154	Ash	<i>Fraxinus excelsior</i>	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	<i>Acer campestre</i>	7.5	367	4	4	2.5	3	Early mature	Twin stem at base	0.5		Fair	Good	40+	C ₂	61	4.4	No	
T156	Field maple	<i>Acer campestre</i>	8	254	4	4	4	4	Semi mature	Twin stem, dead	1		Poor	Poor	<10	U	29	3.0	No	
T157	Elm	<i>Ulmus sp(p)</i>	7.5	291	2.5	2.5	2.5	2.5	Semi mature	Multi stem at base	0.5		Good	Good	20-40	C ₂	38	3.5	No	
T158	Hawthorn	<i>Crataegus monogyna</i>	5.5	160	2	2	2	2	Early mature		0.5		Good	Good	40+	C ₂	12	1.9	No	
T159	Ash	<i>Fraxinus excelsior</i>	13.5	466	6	7	5	5	Semi mature	Ash dieback suspected, multi stem at base	0.5		Fair	Fair	10-20	C ₂	98	5.6	No	
T160	Field maple	<i>Acer campestre</i>	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	<i>Fraxinus excelsior</i>	10.5	339	6	6	3.5	6.5	Semi mature	Multi stem at base	1	W2	Fair	Fair	10-20	C ₂	52	4.1	No	
T162	Ash	<i>Fraxinus excelsior</i>	11	230	1.5	4.5	4	4	Semi mature	Cavity on east side of stem	3	S3	Fair	Fair	10-20	C ₂	24	2.8	No	
T163	Ash	<i>Fraxinus excelsior</i>	8.5	200	2	1	4	5.5	Semi mature	Leaning west	3.5	SW4	Fair	Fair	10-20	C ₂	18	2.4	No	
T164	Ash	<i>Fraxinus excelsior</i>	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	B ₂	434	11.8	No	

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					N	E	S	W												
T165	Field maple	<i>Acer campestre</i>	11.5	480	7	7	7	7	Mature	Top snapped off	0.5	S3	Good	Fair	40+	B2	104	5.8	No	
T166	Ash	<i>Fraxinus excelsior</i>	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	<i>Quercus robur</i>	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	<i>Acer pseudoplatanus</i>	16	1050	9	9	9	9	Mature	Major ivy on main stem, minor deadwood in crown, large amount of epicormic shoots at base	0	N3	Good	Good	40+	A2	499	12.6	No	
T169	Sycamore	<i>Acer pseudoplatanus</i>	16	980	7	10	10	10	Mature	Ivy cover on main stem, minor deadwood in crown	2.5	SW2.5	N/A	Good	40+	A2	434	11.8	No	
T170	Sycamore	<i>Acer pseudoplatanus</i>	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	<i>Acer pseudoplatanus</i>	16	650	5	12	3	7.5	Mature	Ivy on stem, major deadwood in crown, suppressed by neighbouring trees	0	W4	N/A	Fair	20-40	C2	191	7.8	No	
T172	Ash	<i>Fraxinus excelsior</i>	16	980	10	10	7	10	Mature	Ivy cover on main stem, deadwood in crown, cavities in branches	3	NW6	N/A	Fair	20-40	B2	434	11.8	No	
T173	Ash	<i>Fraxinus excelsior</i>	16	820	11	10	2	10	Early mature	Major ivy cover stem, ash dieback suspected, deadwood in crown	2.5	N2	N/A	Fair	10-20	C2	304	9.8	No	
T174	Ash	<i>Fraxinus excelsior</i>	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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					N	E	S	W												
T175	Sycamore	<i>Acer pseudoplatanus</i>	15.5	970	11	11	11	11	Mature	Ivy cover on stem, minor deadwood in crown	3	S4	N/A	Good	40+	A2	426	11.6	No	
T176	Ash	<i>Fraxinus excelsior</i>	15.5	940	10	10	10	10	Mature	Ash dieback suspected, minor deadwood on ground	1.5	S3	Good	Fair	20-40	B2	400	11.3	No	
T177	Sycamore	<i>Acer pseudoplatanus</i>	16	750	8.5	8.5	8.5	8.5	Early mature	Ivy cover on main stem	3	N3	N/A	Good	40+	B2	254	9.0	No	
T178	Sycamore	<i>Acer pseudoplatanus</i>	14.5	700	6.5	5	6	5	Early mature	Ivy on main stem, small cavities at base, minor deadwood in crown	3	N3	N/A	Fair	40+	B2	222	8.4	No	
T179	Ash	<i>Fraxinus excelsior</i>	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	<i>Fraxinus excelsior</i>	9	415	5	5	4	5	Semi mature	Multi stem at base	3		Fair	Fair	20-40	C2	78	5.0	No	
T181	Ash	<i>Fraxinus excelsior</i>	6	311	3	3	3	3	Semi mature	Twin stem at base			Fair	Fair	20-40	C2	44	3.7	No	
T182	Ash	<i>Fraxinus excelsior</i>	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	<i>Quercus robur</i>	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	<i>Malus sylvestris</i>	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	<i>Malus domestica</i>	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	<i>Malus sylvestris</i>	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	

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					N	E	S	W												
T187	Ash	<i>Fraxinus excelsior</i>	9	260	4.5	4.5	4.5	4.5	Semi mature	Suspected ash dieback	1	SW2	Good	Fair	20-40	C ₂	31	3.1	No	
T188	Ash	<i>Fraxinus excelsior</i>	7.5	250	4	4	4	4	Semi mature		2	W2	Good	Fair	20-40	C ₂	28	3.0	No	
T189	Crab apple	<i>Malus sylvestris</i>	7	360	5	5	5	5	Mature		0.5	E1	Good	Fair	20-40	B ₂	59	4.3	No	
T190	Hawthorn	<i>Crataegus monogyna</i>	5	160	2	2	2	2	Early mature	Part of a hedge	1		Fair	Good	40+	C ₂	12	1.9	No	
T191	Beech	<i>Fagus sylvatica</i>	5.5	210	3	3	3	3	Semi mature				Good	Good	40+	C ₂	20	2.5	No	
T192	Ash	<i>Fraxinus excelsior</i>	7.5	360	4	4	4	4	Semi mature	Multi stem at 1.5m height	0.5		Fair	Good	20-40	C ₂	59	4.3	No	
T193	Ash	<i>Fraxinus excelsior</i>	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	C ₂	84	5.2	No	
T194	Norway maple	<i>Acer platanoides</i>	6.5	250	3.5	3.5	3.5	3.5	Semi mature	Multi stem at 1.5m height	1	E1	Fair	Good	40+	C ₂	28	3.0	No	
T195	Field maple	<i>Acer campestre</i>	4.5	240	4	4	4	4	Semi mature		0.5		Good	Good	40+	C ₂	26	2.9	No	
T196	Ash	<i>Fraxinus excelsior</i>	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	C ₂	46	3.8	No	
T197	Field maple	<i>Acer campestre</i>	4	180	3	3	3	3	Semi mature		1	E1	Good	Good	40+	C ₂	15	2.2	No	
T198	Beech	<i>Fagus sylvatica</i>	6	180	4	4	4	4	Semi mature	Rubbing branches at 1.5m	0.5	NW0.5	Fair	Good	40+	C ₂	15	2.2	No	
T199	Small-leaved Lime	<i>Tilia cordata</i>	5	160	2.5	2.5	2.5	2.5	Semi mature		0		Good	Good	40+	C ₂	12	1.9	No	
T200	Horse chestnut	<i>Aesculus hippocastanum</i>	5.5	180	3	3	3	3	Semi mature		1	E1	Good	Good	40+	C ₂	15	2.2	No	
T201	Ash	<i>Fraxinus excelsior</i>	8	290	3.5	3.5	3.5	3.5	Semi mature		1	N1	Good	Fair	20-40	C ₂	38	3.5	No	
T202	Ash	<i>Fraxinus excelsior</i>	7.5	270	4	4	4	4	Semi mature		1	W2.5	Good	Good	20-40	C ₂	33	3.2	No	
T203	Small-leaved Lime	<i>Tilia cordata</i>	4.5	150	2	2	2	2	Semi mature		0.5		Good	Good	40+	C ₂	10	1.8	No	

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					N	E	S	W												
T204	Ash	<i>Fraxinus excelsior</i>	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	<i>Acer platanoides</i>	5.5	228	3.5	3.5	3.5	3.5	Semi mature		0.5		Fair	Good	40+	C2	24	2.7	No	
T206	Beech	<i>Fagus sylvatica</i>	3.5	223	1.5	1.5	1.5	1.5	Young	Multi stem at base			Fair	Good	40+	C2	22	2.7	No	
T207	Hawthorn	<i>Crataegus monogyna</i>	6.5	260	3	3	3	3	Early mature		0		Fair	Good	40+	C2	31	3.1	No	
T208	Norway maple	<i>Acer platanoides</i>	5.5	160	3	3	3	3	Semi mature		1	E1	Good	Good	40+	C2	12	1.9	No	
T209	Ash	<i>Fraxinus excelsior</i>	6.5	238	3	2	3	3	Semi mature		0.5		Fair	Fair	20-40	C2	26	2.9	No	
T210	Field maple	<i>Acer campestre</i>	5	160	4	4	4	4	Semi mature		0.5		Good	Good	40+	C2	12	1.9	No	
T211	Ash	<i>Fraxinus excelsior</i>	3	120	1.5	1.5	1.5	1.5	Young		0.5		Fair	Fair	10-20	C2	7	1.4	No	
T212	Field maple	<i>Acer campestre</i>	3	169	1.5	1.5	1.5	1.5	Young		0.5		Fair	Good	40+	C2	13	2.0	No	
T213	Hornbeam	<i>Carpinus betulus</i>	6.5	150	3	3	3	3	Semi mature		1		Fair	Good	20-40	C2	10	1.8	No	
T214	Field maple	<i>Acer campestre</i>	3.5	120	2	2	2	2	Semi mature		0.5		Good	Good	40+	C2	7	1.4	No	
T215	Small-leaved Lime	<i>Tilia cordata</i>	2.5	75	0.5	0.5	0.5	0.5	Young		1		Good	Good	40+	C2	3	0.9	No	
T216	Horse chestnut	<i>Aesculus hippocastanum</i>	3.5	130	2	2	2	2	Semi mature		1		Good	Good	40+	C2	8	1.6	No	
T217	Horse Chestnut	<i>Aesculus hippocastanum</i>	2.5	100	1	1	1	1	Young		1		Good	Good	40+	C2	5	1.2	No	
T218	Ash	<i>Fraxinus excelsior</i>	9	323	5	5	5	5	Semi mature	Ash dieback suspected, multi stem at base	1.5	S2	Good	Fair	20-40	C2	47	3.9	No	
T219	Small-leaved Lime	<i>Tilia cordata</i>	2.5	100	1	1	1	1	Young		1		Good	Good	40+	C2	5	1.2	No	
T220	Beech	<i>Fagus sylvatica</i>	3.5	150	2	2	2	2	Semi mature		1		Good	Good	40+	C2	10	1.8	No	

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					N	E	S	W												
T221	Small-leaved Lime	<i>Tilia cordata</i>	3.5	180	2	2	2	2	Semi mature		0.5		Good	Good	40+	C2	15	2.2	No	
T222	Horse chestnut	<i>Aesculus hippocastanum</i>	3.5	110	2	2	2	2	Semi mature		1		Good	Good	40+	C2	5	1.3	No	
T223	Ash	<i>Fraxinus excelsior</i>	5	150	3	3	3	2	Semi mature		0.5		Fair	Fair	20-40	C2	10	1.8	No	
T224	Beech	<i>Fagus sylvatica</i>	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	<i>Fraxinus excelsior</i>	4	100	2	2	2	2	Semi mature		1	S1	Good	Fair	20-40	C2	5	1.2	No	
T226	Field maple	<i>Acer campestre</i>	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	<i>Fraxinus excelsior</i>	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	<i>Acer platanoides</i>	5	170	4	4	4	4	Semi mature		0.5		Good	Good	40+	C2	13	2.0	No	
T229	Small-leaved Lime	<i>Tilia cordata</i>	5	200	4	4	4	4	Semi mature		0		Good	Good	40+	C2	18	2.4	No	
T230	Small-leaved Lime	<i>Tilia cordata</i>	4	150	2.5	2.5	2.5	2.5	Semi mature				Good	Good	40+	C2	10	1.8	No	
T231	Elm	<i>Ulmus sp(p)</i>	2.5	75	1	1	1	1	Young		0		Fair	Fair	10-20	C2	3	0.9	No	
T232	Ash	<i>Fraxinus excelsior</i>	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	<i>Tilia cordata</i>	4.5	160	3	3	3	3	Semi mature		0		Good	Good	40+	C2	12	1.9	No	
T234	Norway maple	<i>Acer platanoides</i>	6.5	210	5	5	5	5	Semi mature		0	N1.5	Good	Good	40+	C2	20	2.5	No	
T235	Ash	<i>Fraxinus excelsior</i>	7	350	6	6	6	6	Semi mature		0.5	W1.5	Good	Good	20-40	C2	55	4.2	No	
T236	Ash	<i>Fraxinus excelsior</i>	7	220	4	4	4	4	Semi mature		0.5	S2	Fair	Fair	20-40	C2	22	2.6	No	
T237	Ash	<i>Fraxinus excelsior</i>	7.5	310	5	5	5	5	Semi mature		0.5	N2	Good	Good	20-40	C2	43	3.7	No	

Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	Canopy Spread (m)				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)
					N	E	S	W												
T238	Field maple	<i>Acer campestre</i>	5	250	4	4	4	4	Semi mature		0.5		Good	Good	40+	C2	28	3.0	No	
T239	Ash	<i>Fraxinus excelsior</i>	7	418	5	5	5	5	Semi mature	Twin stem at 1m height	0	W0.5	Good	Good	20-40	C2	79	5.0	No	
T240	Horse chestnut	<i>Aesculus hippocastanum</i>	6	200	4	4	4	4	Semi mature		0		Good	Good	40+	C2	18	2.4	No	
T241	Field maple	<i>Acer campestre</i>	4.5	~ 220	4	4	4	4	Semi mature				Good	Good	40+	C2	22	2.6	No	
T242	Ash	<i>Fraxinus excelsior</i>	6.5	240	4	4	4	4	Semi mature		0.5		Fair	Fair	20-40	C2	26	2.9	No	
T243	Small-leaved Lime	<i>Tilia cordata</i>	5	180	3	3	3	3	Semi mature		0		Good	Good	40+	C2	15	2.2	No	
T244	Norway maple	<i>Acer platanoides</i>	6.5	320	4	4	4	4	Semi mature		1	E1	Good	Good	40+	C2	46	3.8	No	
T245	Ash	<i>Fraxinus excelsior</i>	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	<i>Acer pseudoplatanus</i>	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	<i>Fraxinus excelsior</i>	12	460	6	6	6	6	Semi mature	Ash dieback suspected in crown, deadwood in crown	0.5	S3.5	Fair	Poor	10-20	C2	96	5.5	No	
T248	Elder	<i>Sambucus nigra</i>	2.5	120	1	1	1	1	Mature		0		Good	Good	10-20	C2	7	1.4	No	
T249	Ash	<i>Fraxinus excelsior</i>	14	339	6	1	6	6	Semi mature	Unable to access stem, ash dieback suspected in canopy	3	W3	Fair	Poor	10-20	C2	52	4.1	No	
T250	Ash	<i>Fraxinus excelsior</i>	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	<i>Fraxinus excelsior</i>	10.5	282	5	6	4	2	Semi mature	Unable to access stem, ash dieback suspected in canopy	3	W3	Fair	Poor	10-20	C2	36	3.4	No	

Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	Canopy Spread (m)				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 (m ²)	Radius of RPA (m)	Veteran or Ancient?	Veteran Tree Buffer Radius (m)
					N	E	S	W												
T252	Ash	<i>Fraxinus excelsior</i>	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	A ₃	408	11.4	Yes	14.25
T253	Oak	<i>Quercus robur</i>	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+	A ₃	408	11.4	Yes	14.25
T254	Oak	<i>Quercus robur</i>	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+	B ₂	327	10.2	No	
T255	Oak	<i>Quercus robur</i>	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+	B ₂	327	10.2	No	
T256	Oak	<i>Quercus robur</i>	10	900	6	6	6	6	Early mature	Heavy ivy cover stem, deadwood in crown	1	S2.5	N/A	Fair	40+	B ₂	366	10.8	No	
W1	Holm Oak, Sycamore, Elm, Oak, Blackthorn, Elder, Goat Willow, Rowan, Silver Birch	<i>Quercus ilex</i> , <i>Acer pseudoplatanus</i> , <i>Ulmus sp</i> , <i>Quercus robur</i> , <i>Prunus spinosa</i> , <i>Sambucus nigra</i> , <i>Salix caprea</i> , <i>Sorbus aucuparia</i> , <i>Betula pendula</i>	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 maps ¹ .			Good	Good	40+	A ₃	669	14.6	Yes	15
W2	Larch, Oak, Sycamore, Hawthorn, Blackthorn, Beech, Silver Birch, Ash	<i>Larix decidua</i> , <i>Quercus robur</i> , <i>Acer pseudoplatanus</i> , <i>Crataegus monogyna</i> , <i>Prunus spinosa</i> , <i>Fagus sylvatica</i> , <i>Betula</i>	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+	B ₃	350	10.6	No	

¹ <https://magic.defra.gov.uk/magicmap.aspx>

Ref No.	Common Name	Scientific Name	Tree Height (m)	Stem Diameter (mm)	Canopy Spread (m)				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 (m ²)	Radius of RPA (m)	Veteran or Ancient?	Veteran Tree Buffer Radius (m)
					N	E	S	W												
		<i>pendula, Fraxinus excelsior</i>							occasional to rarely present											
W3	Scots Pine, Hawthorn, Sycamore, Downy Birch, Larch, Spruce, Elder, Pine	<i>Pinus sylvestris, Crataegus monogyna, Acer pseudoplatanus, Betula pubescens, Larix decidua, Picea sp., Sambucus nigra, Pinus sp.</i>	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	<p>Unique identification number together with the Field Reference given to each tree or group.</p> <p>Corresponding number on plan – T = Tree / H = Hedge / G = Group / W = Woodland</p>	
Common Name/Scientific Name	Common name followed by italicised scientific name using binomial nomenclature.	
Tree Height	Height of the tree, measured in metres and recorded to the nearest half metre dimensions up to 10 m and the nearest whole metre for dimensions over 10 m.	
Stem diameter	Diameter of stem measured in millimetres at 1.5 metres above ground level (MS = Multi-stem 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 the first significant branch in metres and its direction of growth (north, south-east or west).	
Canopy Clearance Height	The height to the lowest part of the crown, measured in metres and recorded to the nearest half metre for dimensions up to 10 m and the nearest whole metre for dimensions over 10 m.	
Life Stage	Classification given 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				
	<table border="1"> <tr> <td data-bbox="488 387 683 517">Mature(M)</td> <td data-bbox="683 387 1442 517">Tree in the final third of its normal life expectancy for the species (having typically reached its approximate ultimate size).</td> </tr> <tr> <td data-bbox="488 517 683 658">Ancient (A)</td> <td data-bbox="683 517 1442 658">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.</td> </tr> </table>	Mature(M)	Tree in the final third of its normal life expectancy for the species (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.
Mature(M)	Tree in the final third of its normal life expectancy for the species (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 Condition	<p>The condition of the canopy and photosynthetic parts of the tree.</p> <p>Good – good health and vitality with sufficient leaf cover and size appropriate to the species and age. Tree will likely have minor deadwood.</p> <p>Fair – tree showing some signs of stress such as minor thinning, dieback of branches, discolouration of leaves, smaller leaves than usual or typical leaf pests or diseases. Tree may recover in time or with remedial work.</p> <p>Poor – tree showing strong signs physiological stress. This can include extensive crown dieback, stag heading, sparse foliage and pest infestation. Tree is unlikely to recover.</p>				
Structural Condition	<p>The biomechanical integrity of the stem and woody parts of the tree.</p> <p>Good = no or few minor defects of little significance or easily rectifiable such as damaged or suppressed branches. No adverse risk of failure.</p> <p>Fair = presence of one or more moderate defects. This could include large dead-wood, bark included unions, weak branch attachments, storm damaged limbs, cavities and decay. Work may self-optimize over time or work may be required to remedy the defect.</p> <p>Poor = a tree with major structural defects such as advanced decay or root damage. Works to the tree can be expected.</p>				
Estimated remaining contribution	<p>In years based on the condition and species of the tree. <10 years, 10-20 years, 20-40 years and 40+ years.</p>				
Root Protection Area (RPA)	<p>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.</p>				
Root Protection Area radius	<p>In metres, the radius of the circle around the tree defining the Root Protection Area.</p>				
BS5837:2012 Quality Category	<p>As per Table 1 in BS5837:2012.</p> <p>Category A = trees of high quality with at least 40 years life expectancy</p>				

Term	Definition
	<p>Category B = trees of moderate quality with at least 20 years life expectancy</p> <p>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.</p> <p>Category U = trees of very low quality with less than 10 years life expectancy.</p> <p>1 = Mainly arboricultural qualities</p> <p>2 = Mainly landscape qualities</p> <p>3 = Mainly cultural values including conservation</p>
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 for removal



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 – for removal for Onshore Substation Zone



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



Photograph 8. To39 oak to have earthworks for a drainage basin within its RPA



Photograph 9. To142 ash (veteran)



Photograph 10. Togg ash (veteran) and G31 in background



Photograph 11. Dunnington Lane Category C trees



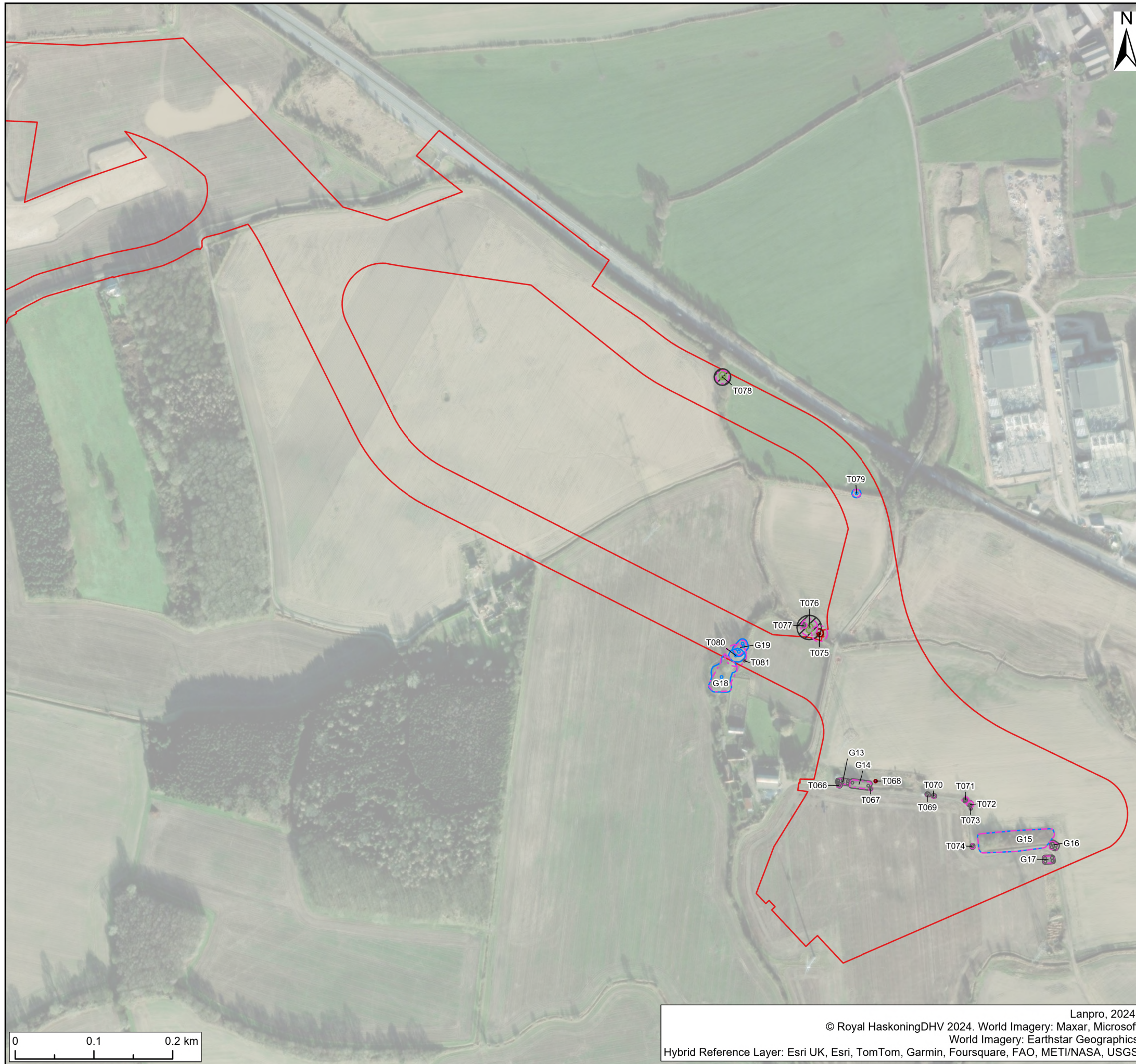
Photograph 12. Eske Lane with T104 and T105 ash and Lombardy Poplar in background



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



Appendix 4. Tree Constraints Plans



- Legend:**
- Onshore Development Area
 - Root Protection Areas
 - Veteran Tree Buffer
 - Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Stem Positions**
- Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Canopy Spread**
- 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 asterisk 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	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Tree Constraints Plan
 Sheet 1 of 27

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

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

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





- Legend:**
- Onshore Development Area
 - Root Protection Areas
 - Canopy Spread
 - Category B tree (moderate quality)
 - Category U tree (very low quality)
- Stem Positions**
- Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)

Notes:
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S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Tree Constraints Plan
 Sheet 2 of 27

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

Co-ordinate system: British National Grid	Page Size: A3	Scale: 1:5,000
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Project: Dogger Bank South Offshore Wind Farms	Report: Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment
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- Legend:**
- Onshore Development Area
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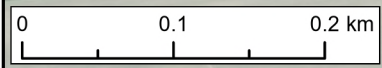
Tree constraints are reflective of tree surveys undertaken between April 2024 – July 2024.

S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Tree Constraints Plan
 Sheet 3 of 27

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





Lanpro, 2024.
 © Royal HaskoningDHV 2024. World Imagery: Maxar, Microsoft
 World Imagery: Earthstar Geographics
 Hybrid Reference Layer: Esri UK, Esri, TomTom, Garmin, Foursquare, FAO, METI/NASA, USGS



- Legend:**
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SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

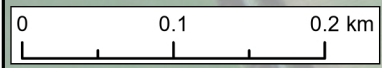
Title:
 Tree Constraints Plan
 Sheet 4 of 27

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

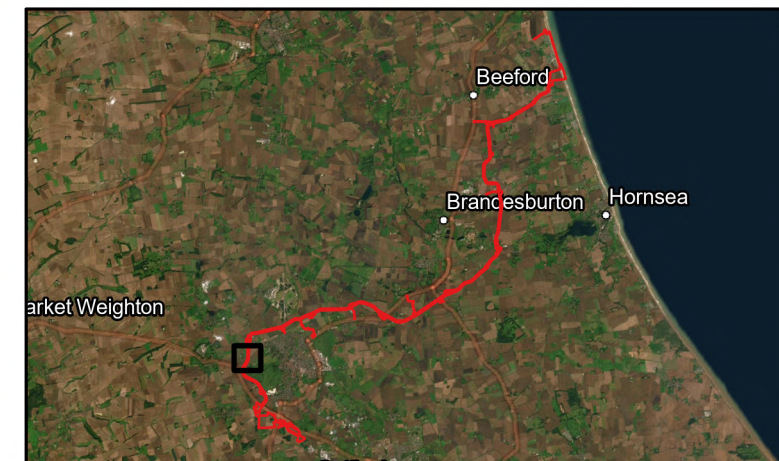
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Project: Dogger Bank South Offshore Wind Farms Report: Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment





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 World Imagery: Earthstar Geographics
 Hybrid Reference Layer: Esri UK, Esri, TomTom, Garmin, Foursquare, FAO, METI/NASA, USGS



- Legend:**
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 - Category A tree (high quality)
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 - Canopy Spread Category A tree (high quality)
 - Canopy Spread Category B tree (moderate quality)
 - Canopy Spread Category C tree (low quality)
 - Canopy Spread Category U tree (very low quality)

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

S2	P01	1/8/2024	Suitable for Information	BH	AL	AL					
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR					

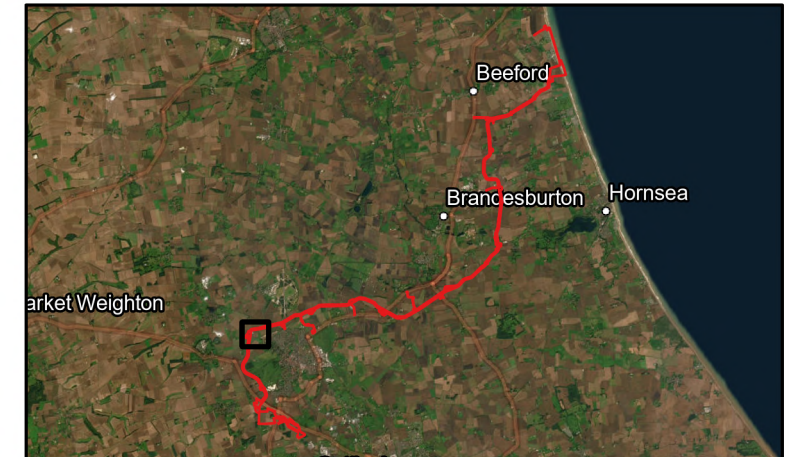
Title:
Tree Constraints Plan
 Sheet 5 of 27

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

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

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





- Legend:**
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Tree constraints are reflective of tree surveys undertaken between April 2024 – July 2024.

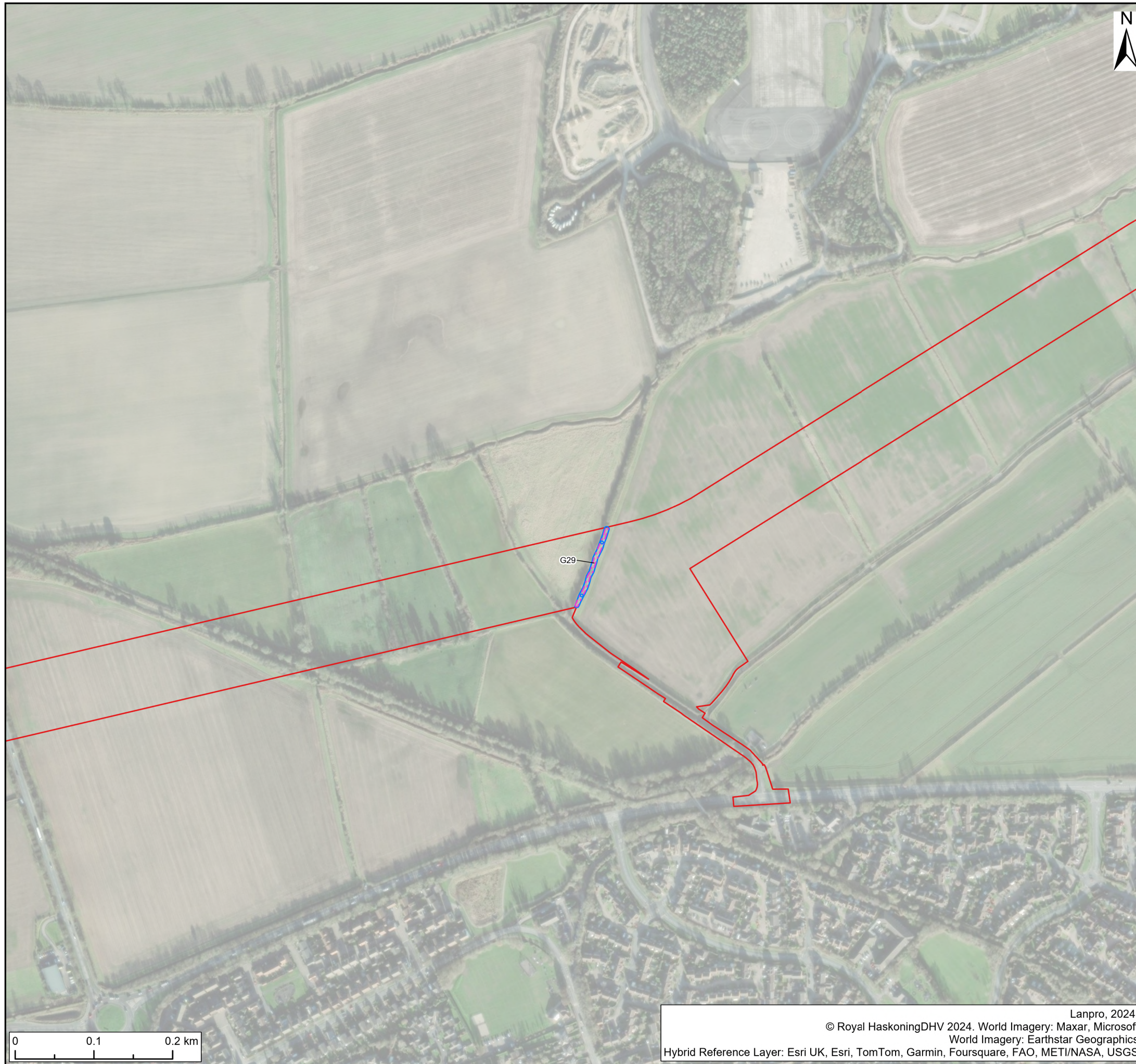
S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
 Tree Constraints Plan
 Sheet 6 of 27

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

Co-ordinate system: British National Grid	Page Size: A3	Scale: 1:5,000
Project: Dogger Bank South Offshore Wind Farms	Report: Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment	





- Legend:**
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 - Category C tree (low quality)
 - Category U tree (very low quality)

Notes:
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S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Tree Constraints Plan
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Figure: 1-27 Drawing No: PC2340-LAN-ON-ZZ-DR-Z-0001

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

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





- Legend:**
- Onshore Development Area
 - Root Protection Areas
 - Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
 - Veteran Tree Buffer
 - Canopy Spread
 - Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Stem Positions**
- Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)

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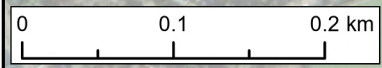
Please refer to the Tree Survey Schedule for full British Standard 5837:2012 tree survey data.

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

S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Tree Constraints Plan
 Sheet 8 of 27

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





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

Notes:
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S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Tree Constraints Plan
 Sheet 9 of 27

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

Co-ordinate system: British National Grid	Page Size: A3	Scale: 1:5,000
Project: Dogger Bank South Offshore Wind Farms	Report: Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment	





- Legend:**
- Onshore Development Area
 - Root Protection Areas
 - Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Stem Positions**
- Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Canopy Spread**
- Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)

Notes:
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S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Tree Constraints Plan
 Sheet 10 of 27

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

Co-ordinate system: British National Grid	Page Size: A3	Scale: 1:5,000
Project: Dogger Bank South Offshore Wind Farms	Report: Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment	





- Legend:**
- Onshore Development Area
 - Veteran Tree Buffer
 - Root Protection Areas
 - Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
 - Canopy Spread Category A tree (high quality)
 - Canopy Spread Category B tree (moderate quality)
 - Canopy Spread Category C tree (low quality)
 - Canopy Spread 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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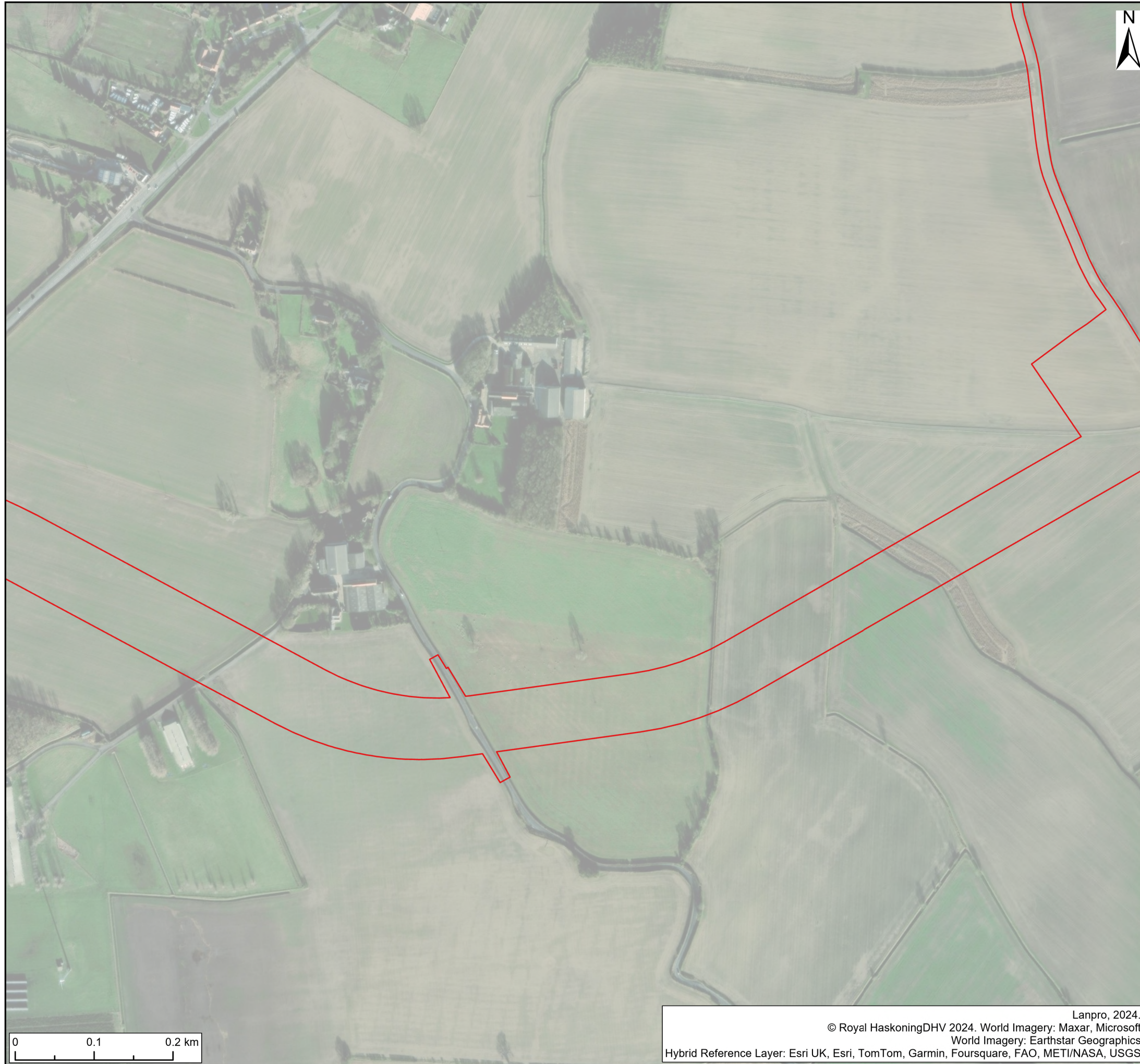
S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Tree Constraints Plan
 Sheet 11 of 27

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

Co-ordinate system: British National Grid	Page Size: A3	Scale: 1:5,000
Project: Dogger Bank South Offshore Wind Farms	Report: Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment	





Legend:

- Onshore Development Area
- Veteran Tree Buffer
- Root Protection Areas
- Category A tree (high quality)
- Category B tree (moderate quality)
- Category C tree (low quality)
- Category U tree (very low quality)
- Canopy Spread
- 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.

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S2	P01	1/8/2024	Suitable for Information	BH	AL	AL			
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR			

Title:
Tree Constraints Plan
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Figure: 1-27 Drawing No: PC2340-LAN-ON-ZZ-DR-Z-0001

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

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





- Legend:**
- Onshore Development Area
 - Root Protection Areas
 - Canopy Spread
 - Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Stem Positions**
- 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.

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S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

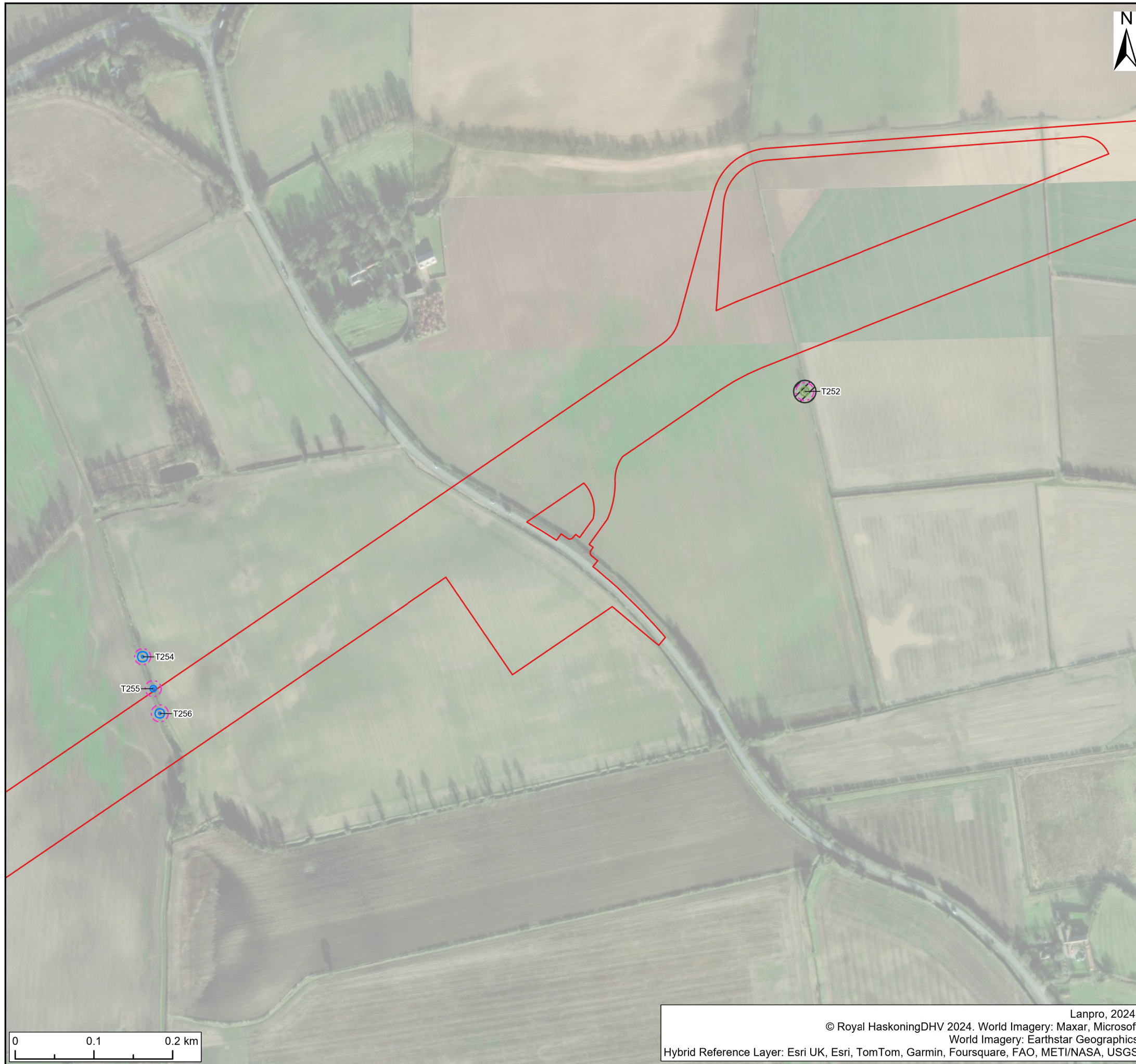
Title:
 Tree Constraints Plan
 Sheet 13 of 27

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

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

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





- Legend:**
- Onshore Development Area
 - Veteran Tree Buffer
 - Root Protection Areas
 - Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Canopy Spread**
- Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)

Notes:
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S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Tree Constraints Plan
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Figure: 1-27 Drawing No: PC2340-LAN-ON-ZZ-DR-Z-0001

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

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





Legend:

- Onshore Development Area
- Veteran Tree Buffer
- Root Protection Areas
- Category A tree (high quality)
- Category B tree (moderate quality)
- Category C tree (low quality)
- Category U tree (very low quality)
- Canopy Spread
- Category A tree (high quality)
- Category B tree (moderate quality)
- Category C tree (low quality)
- Category U tree (very low quality)

Notes:

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S2	P01	1/8/2024	Suitable for Information	BH	AL	AL					
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR					

Title:
Tree Constraints Plan
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Figure: 1-27 Drawing No: PC2340-LAN-ON-ZZ-DR-Z-0001

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

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



- Legend:**
- Onshore Development Area
 - Root Protection Areas
 - Veteran Tree Buffer
 - Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Stem Positions**
- Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Canopy Spread**
- Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)

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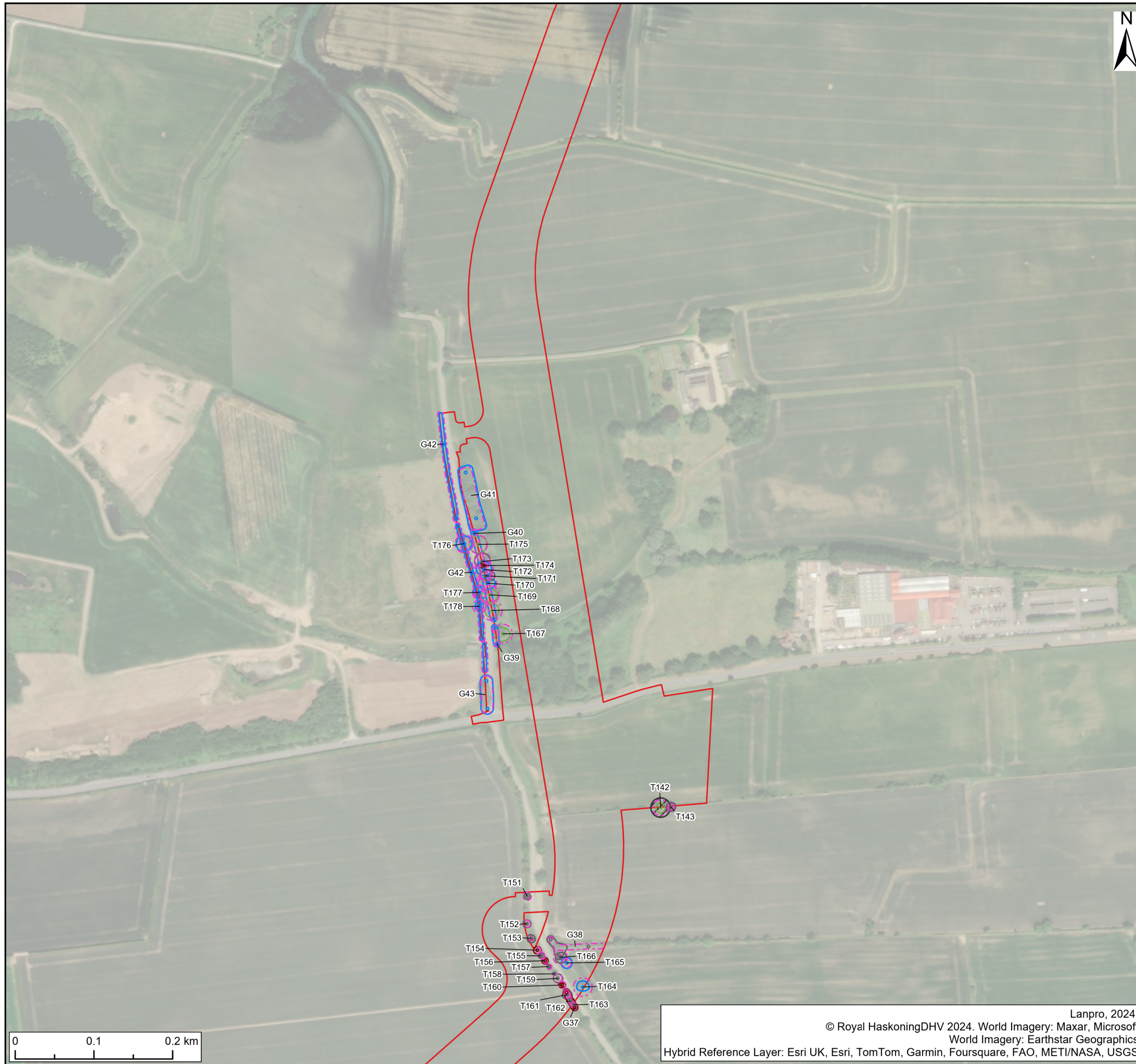
S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
 Tree Constraints Plan
 Sheet 16 of 27

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

Co-ordinate system: British National Grid	Page Size: A3	Scale: 1:5,000
Project: Dogger Bank South Offshore Wind Farms	Report: Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment	





- Legend:**
- Onshore Development Area
 - Root Protection Areas
 - Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Stem Positions**
- Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Canopy Spread**
- Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)

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S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

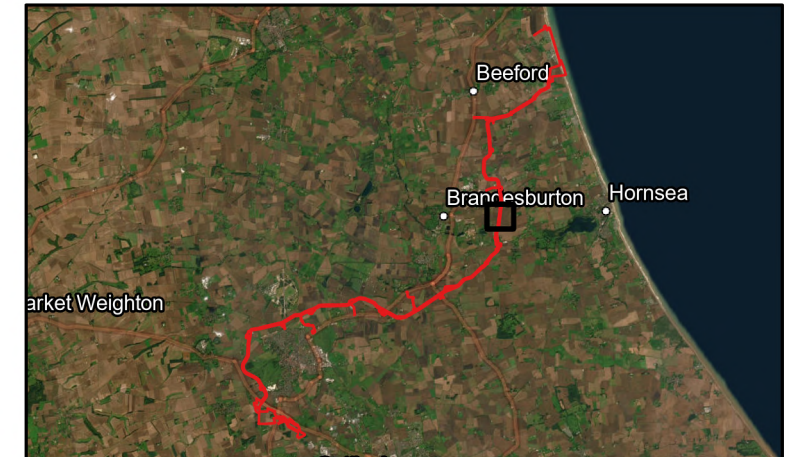
Title:
Tree Constraints Plan
 Sheet 17 of 27

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

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

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





- Legend:**
- Onshore Development Area
 - Root Protection Areas
 - Veteran Tree Buffer
 - Canopy Spread
 - Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)

Notes:
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S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

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 Tree Constraints Plan
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Figure: 1-27	Drawing No: PC2340-LAN-ON-ZZ-DR-Z-0001	
Co-ordinate system: British National Grid	Page Size: A3	Scale: 1:5,000
Project: Dogger Bank South Offshore Wind Farms	Report: Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment	





- Legend:**
- Onshore Development Area
 - Root Protection Areas
 - Veteran Tree Buffer
 - Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
 - Canopy Spread
 - Category A tree (high quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)

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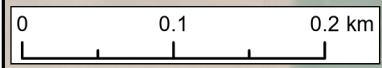
Tree constraints are reflective of tree surveys undertaken between April 2024 – July 2024.

S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
 Tree Constraints Plan
 Sheet 19 of 27

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

Co-ordinate system: British National Grid	Page Size: A3	Scale: 1:5,000
Project: Dogger Bank South Offshore Wind Farms	Report: Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment	





- Legend:**
- Onshore Development Area
 - Root Protection Areas
 - Veteran Tree Buffer
 - Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Stem Positions**
- Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Canopy Spread**
- Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)

Notes:
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S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Tree Constraints Plan
 Sheet 20 of 27

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

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

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





- Legend:**
- Onshore Development Area
 - Veteran Tree Buffer
 - Root Protection Areas
 - Canopy Spread
 - Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Stem Positions**
- Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)

Notes:
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S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Tree Constraints Plan
 Sheet 21 of 27

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

Co-ordinate system: British National Grid	Page Size: A3	Scale: 1:5,000
Project: Dogger Bank South Offshore Wind Farms	Report: Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment	





- Legend:**
- Onshore Development Area
 - Root Protection Areas
 - Veteran Tree Buffer
 - Canopy Spread
 - Category A tree (high quality)
 - Category B tree (moderate quality)
 - 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)

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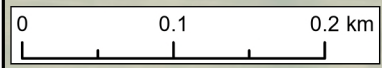
S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
 Tree Constraints Plan
 Sheet 22 of 27

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

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

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





- Legend:**
- Onshore Development Area
 - Root Protection Areas
 - Veteran Tree Buffer
 - Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Stem Positions**
- Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Canopy Spread**
- Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)

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S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

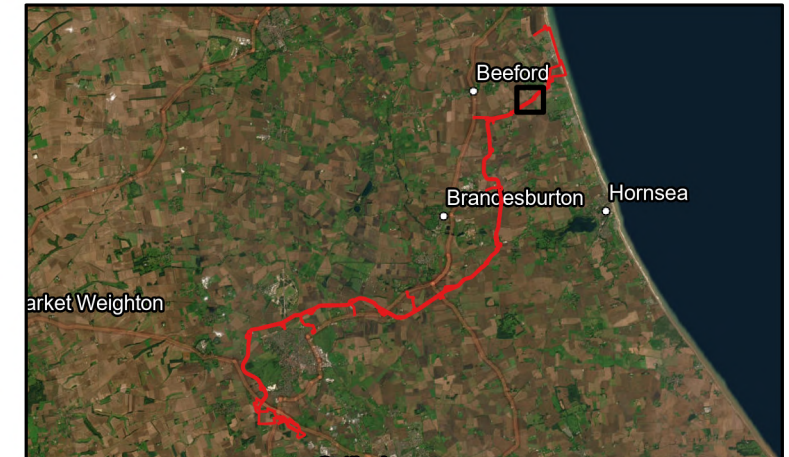
Title:
Tree Constraints Plan
 Sheet 23 of 27

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

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

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





- Legend:**
- Onshore Development Area
 - Root Protection Areas
 - Veteran Tree Buffer
 - Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Stem Positions**
- Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Canopy Spread**
- Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)

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S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
 Tree Constraints Plan
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Figure: 1-27	Drawing No: PC2340-LAN-ON-ZZ-DR-Z-0001	
Co-ordinate system: British National Grid	Page Size: A3	Scale: 1:5,000
Project: Dogger Bank South Offshore Wind Farms	Report: Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment	





- Legend:**
- Onshore Development Area
 - Root Protection Areas
 - Veteran Tree Buffer
 - Canopy Spread
 - Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Stem Positions**
- Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)

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S2	P01	1/8/2024	Suitable for Information	BH	AL	AL					
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR					

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

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

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





- Legend:**
- Onshore Development Area
 - Veteran Tree Buffer
 - Root Protection Areas
 - Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
- Stem Positions**
- 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 asterisk symbol (e.g. G25*) are protected by Tree Preservation Order No. 259 at the Former Broadgates Hospital.

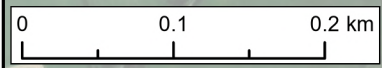
Please refer to the Tree Survey Schedule for full British Standard 5837:2012 tree survey data.

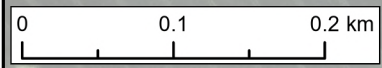
Tree constraints are reflective of tree surveys undertaken between April 2024 – July 2024.

S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Tree Constraints Plan
 Sheet 26 of 27

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





Lanpro, 2024.
 © Royal HaskoningDHV 2024. World Imagery: Maxar, Microsoft
 World Imagery: Earthstar Geographics
 Hybrid Reference Layer: Esri UK, Esri, TomTom, Garmin, Foursquare, FAO, METI/NASA, USGS



- Legend:**
- Onshore Development Area
 - Veteran Tree Buffer
 - Root Protection Areas
 - Category A tree (high quality)
 - Category B tree (moderate quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)
 - Canopy Spread
 - Category A tree (high quality)
 - Category C tree (low quality)
 - Category U tree (very low quality)

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S2	P01	1/8/2024	Suitable for Information	BH	AL	AL
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
 Tree Constraints Plan
 Sheet 27 of 27

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

Co-ordinate system: British National Grid	Page Size: A3	Scale: 1:5,000
Project: Dogger Bank South Offshore Wind Farms	Report: Arboricultural Survey Report and Preliminary Arboricultural Impact Assessment	

