DublinArray
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EIAR Volume 6: Onshore Infrastructure
Technical Appendices
Appendix 6.5.7-2:
Tree Survey Report

Kish Offshore Wind Ltd

RWE SLR GoBe
APEM Group

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Dublin Array Offshore Wind Farm

Volume 6, Technical Appendix 6.5.7-2: Tree Survey Report

Kish Offshore Wind Limited
Bray Offshore Wind Limited

Prepared by:

SLR Environmental Consulting (Ireland) Ltd

7 Dundrum Business Park, Windy Arbour, Dublin, D14 N2Y7

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Basis of Report

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Acronyms and Abbreviations

AIA	Arboricultural Impact Assessment
AMS	Arboricultural Method Statement
BS	British Standard
ECR	Export Cable Route
EIAR	Environmental Impact Assessment Report
CEZ	Construction Exclusion Zone
DART	Dublin Area Rapid Transit
DBH	Diameter at Breast Height
DLR	Dún Laoghaire-Rathdown
DLRCC	Dún Laoghaire-Rathdown County Council
HDD	Horizontal Directional Drilling
NJUG	National Joint Utilities Group
OSS	Onshore Substation
RPA	Root Protection Area
TCC	Temporary Construction Compound
TCP	Tree Constraints Plan
TPO	Tree Preservation Order
TPF	Tree Protection Fencing
TPP	Tree Protection Plan

Glossary of Arboricultural Terms

Term	Definition
Ancient tree	An ancient tree is exceptionally valuable attributed with great age/size/cultural heritage/biodiversity value as a result of significant wood decay and the habitat created from the ageing process. All ancient trees are veteran trees with very few trees of any species reaching the ancient life-stage.
Bark	A term usually applied to all the tissues of a woody plant lying outside the vascular cambium.
Buttress zone	The region at the base of a tree where the major lateral roots join the stem, with buttress-like formations on the upper side of their junction.
Canker	A lesion formed by the death of bark and cambium often due to fungal or bacterial infection.
Condition	An indication of the physiological vitality the tree. Where the term ‘condition’ is used in a report, it should not be taken as an indication of the stability of the tree.

Term	Definition
Conservation Area	A designated area that requires notice (currently six weeks) to be given to the local planning authority prior to the commencement of any tree works.
Construction Exclusion Zone	Area based on the Root Protection Area (in square metres) to be protected during development, by the use of barriers and/or ground protection.
Crown/Canopy	The main foliage bearing section of the tree.
Crown lifting	A term used to describe the removal of limbs and small branches to a specified height above ground level.
Deadwood	Branch or stem wood bearing no live tissues. Retention of deadwood provides valuable habitat for a wide range of species and seldom represents a threat to the health of the tree. Removal of deadwood can result in the ingress of decay to otherwise sound tissues and climbing operations to access deadwood can cause significant damage to a tree. Removal of deadwood is generally recommended only where it represents an unacceptable level of hazard.
Dieback	The death of parts of a woody plant, starting at shoot-tips or root-tips.
Diameter at Breast Height (DBH)	Stem diameter measured at a height of 1.5 metres (UK) or the nearest measurable point. Where measurement at a height of 1.5 metres is not possible, another height may be specified.
Habit	The overall growth characteristics, shape of the tree and branch structure.
Hazard beam	An upwardly curved part of a tree in which strong internal stresses may occur without being reduced by adaptive growth; prone to longitudinal splitting.
Minor deadwood	Dead wood of a diameter less than 25 mm and or unlikely to cause significant harm or damage upon impact with a target beneath the tree.
Notable	Notable trees are usually mature trees which may stand out in the local environment because they are large in comparison with other trees around them
Pollarding	Is the removal of the tree canopy, back to the stem or primary branches. Pollarding may involve the removal of the entire canopy in one operation or may be phased over several years. The period of safe retention of trees having been pollarded varies with species and individuals. It is usually necessary to re-pollard on a regular basis, annually in the case of some species.
Primary branch	A major branch, generally having a basal diameter greater than 0.25 x stem diameter.
Pruning	The removal or cutting back of twigs or branches, sometimes applied to twigs or small branches only, but often used to describe most activities involving the cutting of trees or shrubs.
Root Protection Area (RPA)	An area of ground surrounding a tree that contains sufficient rooting volume to ensure the tree's survival, calculated with reference to BS 5837

Term	Definition
Snag/stub	In woody plants, a portion of a cut or broken stem, branch or root which extends beyond any growing-point or dormant bud; a snag usually tends to die back to the nearest growing point.
Stem/s	The main supporting structure/s, from ground level up to the first major division into branches.
Topping	In arboriculture it is the removal of the crown of a tree, or of a major proportion of it.
Tree Preservation Order (TPO)	Is an order made by the local authority and placed upon individual trees, groups of trees or areas of trees. The local authority must usually grant permission prior to any works undertaken to affected trees.
Veteran tree	A loosely defined term for an old specimen that is of interest biologically, culturally or aesthetically because of its age, size or condition and which has usually lived longer than the typical upper age range for the species concerned.

1.0 Introduction

1.1 Purpose of the Report

Dublin Array Offshore Wind Farm (hereafter referred to as 'Dublin Array'') is proposed approximately 10 kilometres (km) off the east coast of Ireland on the Kish and Bray banks off the coast of counties Dublin and Wicklow. Dublin Array is being developed by Kish Offshore Wind Limited and Bray Offshore Wind Limited

On behalf of Kish Offshore Wind Limited and Bray Offshore Wind Limited (hereafter, the Applicant), SLR Environmental Consulting (Ireland) Ltd has undertaken a tree survey of those sections of the proposed onshore electrical system (OES) associated with Dublin Array, where trees are potentially affected by the construction phase of the OES.

The tree survey has been carried out with reference to 'BS 5837:2012 – Trees in relation to design, demolition and construction – Recommendations' (BSI, 2012). Further to that, the methodology and scope of this report were prepared with reference to Volume 4, NJUG Guidelines for the Planning Installation and Maintenance of Utility Apparatus in proximity to Trees, Issue 2: 16th November 2007 (NJUG Volume 4, 2007).

Trees falling under the BS 5837:2012 requirements were only identified (through desktop / site walkover etc) along the onshore export cable route (ECR). As such, this report focuses specifically on the onshore ECR, including the Clifton Park temporary construction compound (TCC) and smaller localised temporary trenchless crossing compounds.

For clarification, no trees falling under the BS 5837:2012 requirements to be surveyed (i.e. "*trees with a stem diameter of 75 mm or more …, measured at 1.5 m above the highest adjacent ground level")* were identified at the Landfall Site TCC, the Leopardstown TCC or at the site of the new onshore substation (OSS).

The project description in Section 1.2 provides further information on the individual elements and construction activities associated with the onshore ECR.

The gathered tree data was used to advise the Dublin Array onshore ECR planning stage design, avoiding trees, as far as possible, considering the many other constraints present along the onshore ECR (e.g. existing underground utilities, which must be avoided).

Once the corridor of the onshore ECR was finalised, this was overlaid onto the tree data and used to identify those trees in sufficient proximity to the route to be potentially affected and those trees requiring removal, to accommodate the construction phase. Those trees unlikely to be affected were also identified. This report presents the tree survey data, the assessment of the level to which each surveyed tree will likely be affected and the tree protection / mitigation recommendations to be implemented, during the construction phase of the onshore ECR.

1.2 Project Description

A full project description of the proposed Dublin Array is presented in Volume 2, Chapter 2. 6: Project Description (hereafter referred to as the Project Description Chapter) of the Environmental Impact Assessment Report (EIAR), which accompanies the development consent application. Those elements of the proposed development potentially affecting trees and therefore relevant to this report are located along the onshore ECR, as indicated above.

For ease of reference throughout the documents associated with the Dublin Array planning application, the onshore ECR has been divided into seven sectors, labelled Sector 1 through Sector 7. Sector 1 begins west of the Shanganagh Cliffs, Co. Dublin adjacent to the Shanganagh wastewater treatment plant (WWTP), and Sector 7 concludes at the proposed

OSS in Jamestown, c. 7.5 km west. The entire onshore ECR is located within the administrative boundaries of Dún Laoghaire-Rathdown County Council (DLRCC).

The proposed construction works along the onshore ECR comprise the installation of two parallel circuits of underground electricity cables. Each circuit will be installed in a trench approximately 0.7 m wide and 1.4 m deep, with the overall working corridor typically 3-6 m wide (note: up to 10 m wide in agricultural land within Sector 4). The majority of the onshore ECR is located within existing or proposed public road corridors, with some sections crossing public green amenity spaces and parts of the route crossing private land. The two circuits and associated infrastructure will be installed underground using standard open cut trenching methods and is expected to advance at a rate of 20 m per day when installed within roads and 40 m per day when installed within soft ground/greenspace. All trenches will be backfilled at the end of each day and existing surfaces reinstated (note: it is likely that a temporary road surface reinstatement will be carried out for the area completed at the end of each day, with a permanent reinstatement being carried out at a later stage, over larger areas).

Once installed the two circuits will occupy a trench 1.9 m wide. In addition to the circuits, associated underground transmission infrastructure will be required along the onshore ECR, including:

- Up to 20 underground cable joint bays (JBs), occupying an area of 8 m x 2.5 m each. A JB will be required at intervals of 600-850 m along the onshore ECR located strategically to facilitate future access and maintenance of the infrastructure;
- 20 underground link box chambers, one co-located with each JB, with an inspection manhole cover at surface level for future maintenance access;
- 20 underground communication chambers co-located with each JB, with an inspection manhole cover at surface level for future maintenance access; and
- To avoid disruption of significant transport networks and watercourses, trenchless drilling techniques will be used at eight locations along the onshore ECR to cross roads, watercourses and a railway. To facilitate these crossings, temporary trenchless crossing compounds will be set up at either side of the obstacle, occupying varying areas, but typically 45 m by 45 m on the drill entry side and smaller on the drill exit side. At the drill entry site, the compound will also contain the equipment required to facilitate the HDD, including several containers/tanks and the drill rig. The exact dimensions and shape of these compounds will be designed by the appointed contractor, prior to the construction stage and will take account of any tree protection/mitigation measures set out in this report.

Three TCCs are proposed at: the Landfall; Clifton Park (Sector 1) and Leopardstown (at the access to the Leopardstown Racecourse).

1.3 Methodology and Scope

The DLR Tree Strategy 2024-2030 – *A Climate for Trees* states the following regarding Utilities and trenching work:

“Trees in conflict with utilities will be dealt with on a case-by-case basis. The relevant utility company must consult with dlr Parks prior to any intended tree work, trenching or other works that are likely to affect Council-owned trees. All such work shall be in accordance with dlr’s Directions for Roadworks Control and with recommendations of the current NJUG (UK National Joint Utilities Group) Guidelines for The Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees.”

While NJUG Volume 4, 2007 is a UK guidance document its descriptions of how trees are damaged by utility apparatus (such as water pipes, internet cables, gas pipes) and how to avoid this damage can be universally applied.

Applied to Dublin Array, the laying of the onshore ECR was identified as having the greatest potential to affect existing trees, due to the presence of trees in the vicinity of much of the ECR. The required excavation of trenches, as well as JBs and drill entry and exit pits, may result in the direct loss of trees or damage to the tree root system. The latter, while not resulting in immediately visible damage, may have an impact on the tree's future vitality and/or stability.

In addition to the trenching works, the storage/movement of plant, equipment and material within the TCCs may result in soil compaction, which can restrict the oxygen levels within the ground and thereby have an effect on the functioning/survival of tree roots.

In order to reduce the level of damage to tree roots, NJUG describes the following three Tree Protection Zones:

- *"**PROHIBITED ZONE – 1 m from trunk**. "Excavations of any kind must not be undertaken within this zone unless full consultation with the local authority Tree Officer is undertaken. Materials, plant and spoil must not be stored within this zone".*
- ***PRECAUTIONARY ZONE – 4 x tree circumference**. "Where excavations must be undertaken within this zone the use of mechanical excavation plant should be prohibited. Precautions should be undertaken to protect any exposed roots. Materials, plant and spoil should not be stored within this zone. Consult with the local authority Tree Officer if in any doubt".* Please note that the precautionary zone roughly equates to the Root Protection Areas (RPA) of a tree, as defined in BS 5837:2012 (i.e. it is slightly larger, as it equates to 12.56 x the stem diameter, whereas the RPA is calculated as 12 x the stem diameter, refer to Table 5-2).
- ***PERMITTED ZONE – outside of the precautionary zone**. "Excavation works may be undertaken within this zone, however caution must be applied and the use of mechanical plant limited. Any exposed roots should be protected."*

While some minor adjustments to the ECR could be made, following the initial stages of the tree survey, it was not possible to avoid all trees potentially affected by the works. This is due to the congested urban environment along the ECR and associated restricted area within which the two circuits of underground cables could be laid. The NJUG tree Protection Zones were therefore mainly used in the assessment of the level to which the trees are likely to be affected, i.e. depending on whether the ECR avoids or encroaches the precautionary and/or prohibited zone. The level of effect predicted for each tree is presented using a traffic light system, and associated tree protection/mitigation recommendations are provided, as described in more detail below.

The following step-by-step methodology was adopted for the tree survey and this report:

1 **Identification of trees to be surveyed:** A high-level review of the trees potentially affected by the onshore ECR was carried out. This was done with the aid of the SLR Dublin Array GIS viewer, which sets out the ECR on satellite imagery and therefore allows the identification of trees nearby. Also using Google Maps and Google Street View the trees were selected depending on their proximity to the ECR and their size (i.e. as trees with larger canopies typically have larger RPAs). The initial list of trees for surveying was defined using professional judgement and validated during the field work with additional trees added and others omitted from the list during the field survey, as appropriate.

This initial assessment identified trees falling under the BS 5837:2012 requirements for assessment (i.e. trees with a stem diameter of 75 mm or more) within Sectors 1-6 along the ECR. No such trees were identified in Sector 7.

2 **Tree survey and survey level:** For the majority of trees a basic survey was carried out, focusing on their RPAs, as these will be the most likely parts of the tree to be affected. This is particularly the case along road corridors, where the crowns of trees have been shaped by passing large vehicles and therefore additional above ground damage to trees caused by ECR construction plant/machinery is less likely. Also considering the large number of trees to be surveyed, this was considered a proportionate approach.

A number of trees were identified, for which full BS 5837:2012 surveys were considered necessary, due to an increased risk of above ground damage, i.e. the mature tree stock within the Eurofound site north of the N11, where the trenchless crossing entry pit and associated temporary works compound will be located.

The following details were recorded for the two survey levels. Please note that the ArcGIS FieldMaps app was utilised in the recording of the basic survey level data, which enabled the transfer of the data recorded straight onto GIS.

a) The following details were collected within the basic tree survey:
    i. Tree ID;
    ii. Tree location (i.e. selection of the location of tree trunk on the map in the Field Maps App, which automatically captured a GPS location for each tree);
    iii. Photo(s) of tree;
    iv. Tree species (selected from a pre-populated list or individually added, for those not included in the list);
    v. Stem diameter (at 1.5 m height, as per BS 5837:2012); and
    vi. General observations, as appropriate, e.g. indication of overall tree condition (i.e. good, fair, poor); presence of significant disease/defect (e.g. ash dieback; leaning stem, etc.)

b) For the full BS 5837:2012 tree survey the following additional details were recorded:
    i. Tree height;
    ii. Branch spread (four cardinal points);
    iii. Height above ground of first significant branch and canopy;
    iv. Life-stage;
    v. Estimated Remaining contribution in years; and
    vi. BS 5837:2012 category (i.e. U, A, B or C).

The tree survey was carried out on three dates in 2023 and 2024. Those trees to the east of the N11 were surveyed on 20th and 21st July 2023 and those to the west of the N11 on 23rd September 2024. Eurofound in Sector 2 was visited both in July 2023 and September 2024. In addition, the tree survey data for some trees within Loughlinstown Linear Park in Sector 2 gathered as part of a constraints study for Dublin Array on 6th June 2019 was incorporated into the results.

3 **Tree Survey Data:** The Tree Survey Schedule providing the data collected as part of the basic tree survey for all trees is provided in Appendix A of this report. In addition,

the data of the full BS 5837:2012 Tree Survey Schedules for the trees within Eurofound e are provided in Section 5.2.

4 **Tree Survey Results Mapping:** For the purpose of this project, it was decided to deviate from the requirements of a Tree Survey Plan, as set out in BS 5837:2012. Mainly, to focus on the rooting zones of the trees, based on the Tree Protection Zones defined in the NJUG guidance (Volume 4, 2007). But also, because not all of the data was recorded, as part of the basic survey (e.g. branch spread and tree categories) and to make the potential impact on trees easily identifiable. To facilitate this, a traffic light system was developed, indicating to what extent each of the trees surveyed are likely to be affected by the ECR. This is described in more detail below.

The Tree Survey Results Mapping (refer to Drawing No. 6 in Appendix B of this report) illustrates the location of the proposed two underground cable circuits along the onshore ECR, as well as the location and extent of joint bays, HDD compounds and TCCs on satellite imagery. The mapping also indicates the application site boundary and relevant ECR sectors (i.e. 1-7).

In addition to the above, the following tree survey results are provided:

a) Location of surveyed trees and corresponding Tree ID number;

b) Tree Protection Zones:

   i. Prohibited Zone;

   ii. Precautionary Zone/RPA (note: the area shown is the BS 5837:2012 RPA); and

   iii. Permitted Zone, i.e. the entire area outside of the precautionary zone (note: this is not highlighted in colour on the mapping).

c) Traffic Light System (i.e. colour of Tree ID number), denoting the level of impact of the ECR on the trees. Where the level of impact was borderline between two levels, a precautionary approach was taken and the higher impact level selected:

   i. **Green** = Trees not affected by the ECR (as all of works area clearly outside the RPA/Precautionary Zone);

   ii. **Orange** = Trees potentially affected by the ECR (as works area located partially within or very close by the RPA/Precautionary Zone); and

   iii. **Red** = Trees that will require removal to facilitate the construction of the ECR (as works area covering a large part of RPA/Precautionary Zone and in some cases trees in poor condition and are unlikely to have the necessary vitality to tolerate the required root loss)

5 **Tree Protection/Mitigation Recommendations:** Tree protection/mitigation recommendations, as well as specific recommendations, depending on the level of impact on trees are provided. These are to be implemented, during the construction works, to mimimise the impact on trees and ensure that sufficient replacement planting it provided, where trees require removal.

1.4 Limitations and Assumptions

Limitations to the tree survey include the following key points:

- National Tree Map data was purchased from Bluesky Ireland, for the length of the onshore ECR, including 50 m either side of it. This provides tree location and canopy data, which provided a starting point for the tree survey in the FieldMaps App. The data was beneficial for the majority of stand alone trees, as the centre points provided for these trees, which represent the highpoint of the crown, also reasonably

accurately represent the location of their stems. However, the data was found less useful for groups of trees or treelines, as the centre points in this case do not represent the location of the stems of the individual trees within these groups/lines. Therefore, centre points needed to be manually added, using the trees visible on the satellite image displayed in the app. While it was felt that the manually added tree locations were more accurate than those provided by the National Tree Map data, there is still a level of inaccuracy, due to the quality of/detail visible on the satellite images. This was counteracted by taking a precautionary approach, in the application of the traffic light system, as described in 1.3 above.

- The Onshore ECR is represented by two lines of a nominal width on the Tree Survey Results Mapping. For clarification, the width of the lines do not represent the exact width of the trenches which will be excavated or the overall cable corridor. Similarly, the trenchless crossing compounds are illustrated as regularly shaped areas, whereas their final shapes will be decided as part of the detailed design., In order to allow for slightly larger areas covered by the trenches and variation in configurations of the trenchless crossing compounds, to what is shown on the mapping, any trees with RPAs located just outside the trenchless crossing compounds were included in the potentially affected category. Where it is considered unlikely that roots will be present (such as on the opposite side of a road to a tree where the roots are more likely to be located in an unsealed surface area around the tree due to the greater availability of soil material and water), trees were not included.
- The health and condition of trees can change rapidly and all trees, even healthy ones, are at risk from unpredictable climatic and man-made events. This report is based on the observed health and structural condition of the trees at the time of survey by suitably qualified inspectors. The health, condition and safety of trees should be checked on a basis commensurate with the level of risk and preferably on an annual basis. This should be based on *A Guide for Landowners to Managing Roadside Trees* (DAFM & TCI) and/or the recommendations made in the UK guidance document *Common Sense Risk Management of Trees* (National Tree Safety Group, 2011). The scope of this tree survey does not include consideration of tree health and safety survey.
- An RPA provides a notional circular buffer around a given stem, based on the stem diameter measured at 1.5 m above ground level. The RPA represents the minimum amount of root zone that is required in order to retain the tree in a safe and healthy manner. However, this is not necessarily representative of a tree root system e.g., the roots may extend beyond the RPA boundary on one side and remain inside it on the opposite. The root network extent is dependent on many factors including species, age, soil conditions, topography and exposure etc. The assessment has not taken consideration of these factors and shows RPAs as an indicative circular form as per the BS 5837:2012 guidance.
- A thorough search for symptoms of disease, parasites, or fungi that may be affecting trees was not undertaken as part of the survey. Such symptoms where only noted where clearly obvious, such as in the case of ash dieback disease (*Hymenoscyphus fraxineus*). Symptoms are not always apparent; therefore, it is possible that trees affected by disease/parasites/fungi are present within the survey area but could not be identified by surveyor.
- Where the main trunks of trees have limited access due to dense vegetation, epicormic growth or are ivy (*Hedera helix*) clad, the inspection of such trees was limited and stem diameters were estimated.
- Some trees in the scope of the survey are located on private ground, where access was not available. For these trees the data was approximated, in particular the stem

diameters, based on what was visible from publicly accessible areas. This introduces a degree of inaccuracy, however, a precautionary approach is taken by the surveyor in the application of the traffic light system, as described under 1.3 above.

2.0 General Arboricultural Principles

2.1 General Principles

Trees are dynamic living organisms which provide essential benefits to society and the wider environment. Any proposed development with the potential to impact on trees must take into consideration the value of trees on site, the impact of any proposed activity, and any potential future conflicts on the site. Suitable measures to safeguard retained trees or mitigate the loss of trees (to be removed) will need to be fully considered.

Tree branches and roots frequently grow across site boundaries and off-site trees can pose a constraint and should be carefully considered when assessing the developable space within a site.

2.2 Below Ground Constraints

Below ground tree roots and the soil environment in which they grow need to be protected if the tree will be retained. Trees grow in association with fungi and other soil organisms which are of key importance to tree health. Roots are essential for anchorage, the uptake of water and nutrients, and the storage of energy (carbohydrates) for the future growth and function of the tree.

Roots have potential to be damaged by physical severance or wounding (e.g. following excavation of the soil) which can lead to the development of decay and a decline in vitality and/or instability. Raising the soil level can bury tree roots at a depth where suitable conditions for growth are less available. Toxic materials discharged into the soil (such as cement based aggregates, fuel and chemicals) can lead to root death and dysfunction. Soils can be compacted to levels inhospitable to tree growth with even a single pass of machinery, regular pedestrian traffic or the storage of plant and materials. Relieving compaction can be problematic and may require costly remedial works. Changes in drainage/water levels can also have significant long-term impacts for tree health.

The effects of these incursions may take many years to manifest, with a resulting decline in amenity value and potentially the death or failure of the tree. It should be noted that older trees are particularly sensitive to damage and changes in conditions.

The RPA is a notional area considered to be the minimum zone that must be protected to avoid any adverse impacts on retained trees. This area is deemed to be particularly important for tree stability, growth, function and health. However, roots may extend far greater distances, with the distribution of the root system relating directly to the availability of suitable conditions for growth (namely oxygen, water and nutrients). It is accepted that tree roots grow predominantly near the surface, with 80-90% being located in the upper 60cm of soil, however, roots may develop at deeper levels where conditions allow.

The RPA of the existing tree stock is an important material consideration when assessing site constraints and planning development activities. The default position should be that all development, including any associated services will occur outside the RPAs of retained trees. Where this is unavoidable, it may be appropriate to use special measures to install structures, services or surfacing within RPAs which allow the protection of roots and soil structure which are essential for tree growth and keep any incursion to a minimum. Further steps to improve or increase the useable rooting area available to the tree may also be required.

2.3 Above Ground Constraints

Tree stems and branches can restrict available space on a development site. Damage or wounding (including excessive pruning) can significantly reduce the amenity contribution of the tree and may lead to the development of dysfunction and decay, with significant long-term implications for tree health. The future impact of existing trees should be carefully considered, including individual species characteristics (such as potential future size, fruit fall, shade etc.) and how the tree will interact with any proposed development and future land use. Annual tree growth can lead to direct damage if stems/branches (or roots) come into physical contact with structures and this should also be taken into consideration.

2.4 Trees and Risk in the Context of Development

Tree owners/managers have a legal duty to prevent foreseeable harm. It is generally accepted that this duty can be fulfilled by undertaking proactive inspections of significant trees to identify obvious defects and by taking appropriate remedial action or gaining further advice as appropriate.

There is no general Irish guidance on tree risk assessment. A guide to Landowners to Managing Roadside Trees (DAFM & TCI, 2021) provides some information on this topic. Further guidance is available from the UK's National Tree Safety Group (https://ntsgroup.org.uk/).

The tree survey carried out as the basis of this report is primarily for planning purposes, focusing on the potential effects of the proposed development on the tree stock and is not specifically designed to assess the safety of the trees identified. However, where obvious issues have been identified these have been noted in the Basic Tree Survey Schedule provided in Appendix A and full BS 5837:2012 survey in section 5.2.

2.5 Trees and Wildlife

Full consideration must be given to the presence of species protected under the Wildlife Act 1976 (as amended), in particular the presence of bats and nesting birds. There is a legal restriction on hedge cutting between the 1st of March and the 31st of August each year, as set out in Section 40 of the Wildlife Act 1976 as amended by the Wildlife (Amendment) Act 2000 and the Heritage Act 2018, with limited exemptions. The advice of a suitably qualified ecologist is recommended in relation to any potential impacts on protected species.

2.6 Tree Works

Any tree surgery recommendations contained within this report are to be undertaken in accordance with BS3998: 2010 Tree work – Recommendations (BS3998) by suitably qualified and insured contractors. Significant pruning works are best undertaken when trees are dormant or outside periods of high functional activity to reduce the overall impact on energy available to the tree for growth and processes. In general, the optimum period for works is between November to February and July to August (subject to the presence of protected species) when the tree is less active and better placed to respond to wounding and a reduction in leaf area.

3.0 Legal Considerations

3.1 Tree Preservation Orders

The Dún Laoghaire-Rathdown County Development Plan 2022-2028 was reviewed, and there were no active Tree Preservation Orders identified within the corridor or in the vicinity of the onshore ECR.

3.2 Felling Licence

The felling of trees is regulated in Ireland by the Forestry Act 2014 (the Act). The Department of Agriculture, Food and the Marine oversees the enforcement of the provisions of the Act.

The felling of trees in Ireland is restricted under Part 4, Sections 16-21, of the Act. It requires that felling is either authorised by a felling licence issued by the Minister for Agriculture, Food and the Marine or that the felling activity is exempted from the need for a licence.

There are many exemptions to the need for a licence, based on the type of the tree, the location of the tree, the size of the tree, the nature and scope of the felling activity and the person responsible for the felling. These are primarily set out in section 19 of the Act.

The exemptions most relevant to the proposed planning application, are;

19. (1) A tree—

… (b) within 30 metres of a building (other than a wall or temporary structure), but excluding any building built after the trees were planted,

… (m) outside a forest—

(i) within 10 metres of a public road and which, in the opinion of the owner (being an opinion formed on reasonable grounds), is dangerous to persons using the public road on account of its age or condition,

(ii) the removal of which is specified in a grant of planning permission,

… shall be an exempted tree.

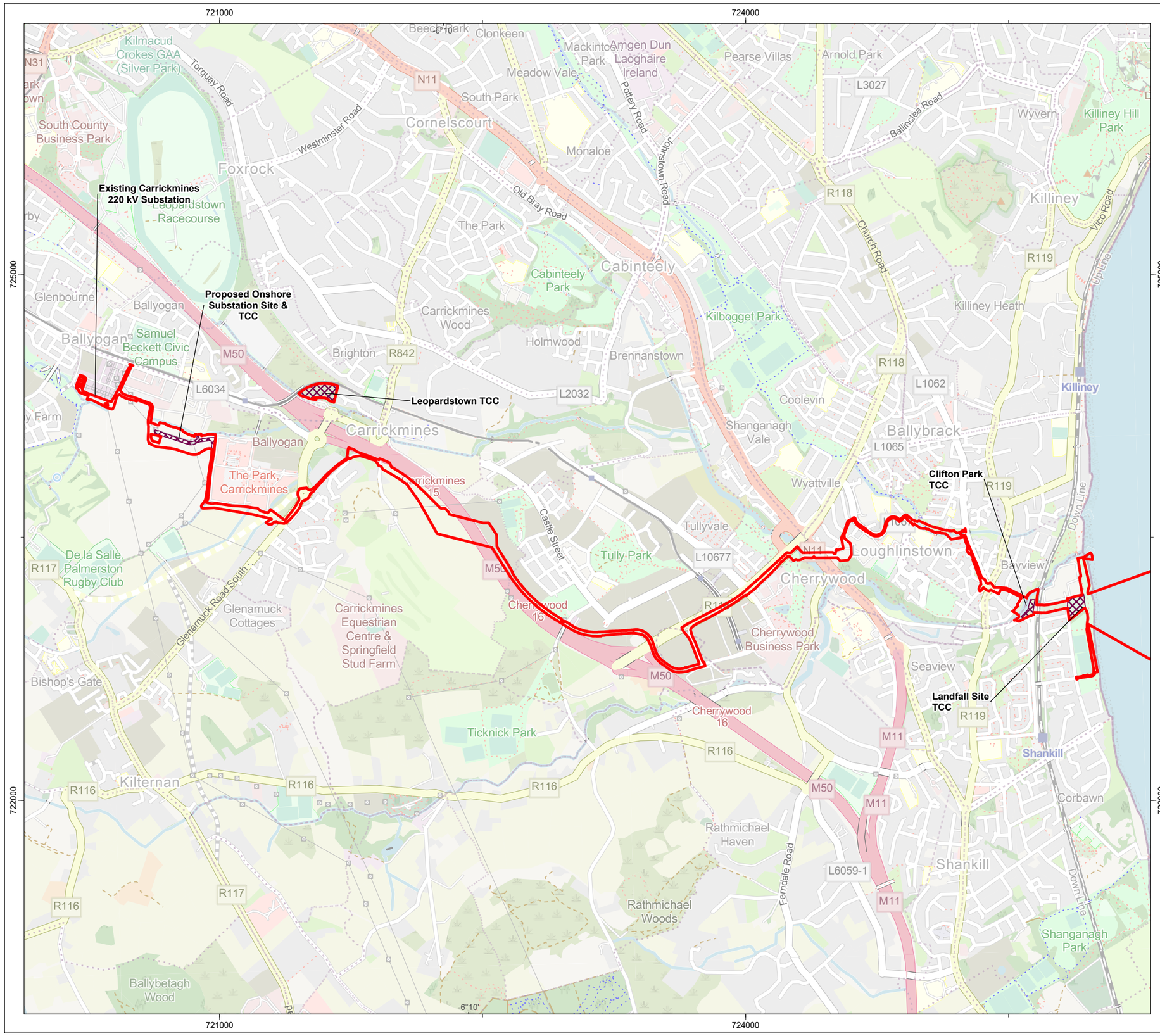
Advice from a suitably qualified arboriculturist should be sought before any felling takes place on site.

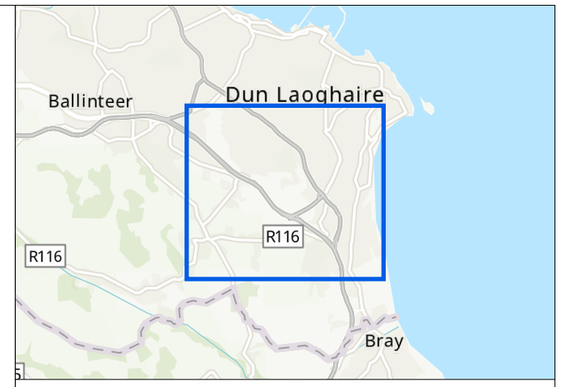
4.0 Site Observations

4.1 Site Location

The area surveyed is located along the onshore ECR of Dublin Array, typically within 20 m (i.e. slightly larger than the maximum BS 5837:2012 RPA, defined as a circle with a radius of 15 m). The relevant section of the ECR, i.e. Sectors 1-6) runs between the proposed Landfall Site at Shanganagh Cliffs, Co. Dublin, and Glenamuck Road South (R842). The approximate ITM Grid reference at the Landfall Site is 725850:723050 and at the OSS site 720800:724000. The extent of the entire OES, including TCCs is shown in Figure 4-1 below.

A more detailed OES Design, including the ECR Sectors, is provided in Appendix B, the Tree Survey Results Mapping.





Application Site Boundary

Temporary Construction Compound (TCC)

DRAWING STATUS

PUBLIC

DISCLAIMER

MAP NOTES / DATA SOURCES:

PROJECT TITLE

Dublin Array

DRAWING TITLE

Tree Survey Report: Onshore Electrical System (OES) and TCC Site Location

DRAWING NUMBER: **Figure 4-1**

PAGE NUMBER: **1 of 1**

VER	DATE	REMARKS	DRAW	CHEK	APRD
01	2025-02-04	DRAFT	JK	SW	AE
02	2025-01-16	PUBLIC	JK	AM	AM

0 0.1 0.3 0.4 0.5 Kilometres

0 0.13 0.25 0.38 0.5 Miles

N GRID NORTH

SCALE 1:22,148 PLOT SIZE A3

DATUM IRENET95 VERTICAL REF ODN/LAT/MLLW

PRJ IRENET95 Irish Transverse Mercator

SLR

Dublin Array Generation for generations

Kish Offshore Wind Limited - Bray Offshore Wind Limited

4.2 General Tree/Site Observations

The different types of tree stock present in each of the ECR sectors (broken into smaller areas) and number of trees recorded in each area are described in Table 4-1 below.

Table 4-1: Types of tree stock and tree numbers by ECR Sector

Tree ID numbers	Area covered	Types of tree stock present	No. of trees
Sector 1 (Total trees recorded: 113*)			
0001-0014 0180-0195	Trees along Dublin/Wexford railway, along Shanganagh River and in green space to west of river.	Mature** treelines consisting of mainly ash, sycamore and alder along DART and Shanganagh River; clumps of early mature maple, poplar and alder in Clifton Park green space.	30*
0015-0033	Bayview Glen, Bayview Crescent & Bayview Glade	Early mature/mature street trees in narrow grass verge, mainly birch.	23
0034-0093	Shanganagh Road	Mix of young street trees at southern end (cherry, rowan), mature trees on mostly private ground on eastern side of road (maple, ash, sycamore) and mature hedgerow trees on western side of road (ash, sycamore, hawthorn) – note: ash affected by ash dieback to varying degrees	60*
Sector 2 (Total trees recorded: 131*)			
0287-0306	Loughlinstown Linear Park	Five mature trees (3 ash, oak & lime) and 15 young maples along footpaths, all of which are in a fair condition (small/discoloured leaves)	20
0094-0105 0130-0179	Loughlinstown Drive & Cherrywood	Early mature/mature street trees. Mostly elm with crowns shaped by road corridor along Loughlinstown Drive. Mix of trees, including cherry, whitebeam, maple along Cherrywood.	62
0106-0129 0200-0221	DLR Parks Depot (off Loughlinstown Drive) & Eurofound	Several mature pines along W boundary of DLR Parks Depot with understorey of mixed trees. Mix of mature specimen trees (oak, sycamore, lime) and semi-mature/early mature trees (oak, birch, redwood) in Eurofound (see full BS 5837:2012 survey of some of these trees in section 5.2).	46*
Sector 3 (Total trees recorded: 30*)			
0222-0251	R118 – Cherrywood Park and green space S of N11	Row of young/semi-mature maple along R118; mostly young trees in Cherrywood Park green space in fair condition (not establishing well); mature treeline along N11	30*
Sector 4 (Total trees recorded: 1*)			
0252	Cherrywood Avenue (South of R118)	Two semi-mature sycamore (one recorded) - note: while there are some trees currently present along this sector, they will be removed, as part of the proposed development of Beckett Road, within which the ECR will be located. Beckett Road is a planned road as part of the Cherrywood Strategic Development Zone	1*

Tree ID numbers	Area covered	Types of tree stock present	No. of trees
		(SDZ) Planning Scheme. The first 1.4km of this road is consented and planned to be completed by 2026. Cable ducts are planned to be installed in this section of Beckett Road to facilitate installation of utility connections, including the onshore export cables for the proposed Dublin Array development. No trees are located in the vicinity of the ECR in the remaining section of Sector 4. Therefore, no further trees were surveyed in this sector.	
Sector 5 (Total trees recorded: 31*)			
0253-0278 0282-0286	Golf Road	Mature hedgerow trees at eastern end (mostly ash); young/semi-mature mixed tree planting outside Blackberry Hill (planting area slightly raised); mix of mostly mature trees (often on private ground) at western end (some separated from road by a ditch; many ash) – note: ash affected by ash dieback to varying degrees	31*
Sector 6 (Total trees recorded: 3*)			
0279-0281	Glenamuck Road.	Early mature fastigiate hornbeam on east side of road (one recorded); two mature ash at point where ECR turns west into neighbouring field – note: ash affected by ash dieback to varying degrees	3*

*More trees are present in these areas, but not all were recorded, if they were in large groups. Only the largest or sample trees were recorded, to give a representation of the typical RPAs/Precautionary Zones present.

** Refer to Table 5-2 for a definition of the life stages of the trees described.

5.0 Tree Survey

5.1 Basic Tree Survey (All Trees)

The Basic Tree Survey Schedule, presenting the data collected for the total of 306 trees surveyed, can be found in Appendix A. The Tree Survey Results Mapping, indicating the tree locations and associated tree protection zones (i.e. prohibited zone and precautionary zone, refer to section 1.3) can be found in Appendix B.

5.2 Full BS 5837:2012 Tree Survey (Eurofound)

5.2.1 Tree Survey Results

The Eurofound site at Loughlinstown, Co. Dublin, was visited by a qualified SLR arboriculturist on two dates, i.e. 21st July 2023 and 23rd September 2024. A survey was undertaken in accordance with BS 5837:2012 of those trees within the site that are most likely to be affected by the underground electricity circuits and the temporary works area associated with the entry site for the HDD crossing of the N11, due to their proximity and/or large size. Some further trees were recorded as part of the basic tree survey, mostly so they could be safely ruled out from being affected (refer Appendix A).

Table 5-1: Summary of total number of trees surveyed and their relative BS 5837:2012 categories

BS 5837:2012 Categories	Trees	Tree Groups	Hedgerows	Totals
A	3	0	0	**3**
B	13	0	0	**13**
C	0	0	0	**0**
U	0	0	0	**0**
Totals	**16**	**0**	**0**	**16**

- Category ‘A’ trees are of high quality and value and should be retained.
- Category ‘B’ trees are of moderate quality and value and should be considered for retention where possible, although care should be taken to avoid misplaced retention. Any scheme should consider the retention and protection of trees, but also the tree’s future growth.
- Category ‘C’ trees are of low quality and value and should not place a constraint on the proposals.
- From an arboricultural point of view, the Category ‘U’ trees cannot realistically be considered for retention as a living tree in the context of the current land use due to their low life expectancy of less than 10 years in their current poor condition.

Refer to Table 5-2 for further information on the BS 5837:2012 category grading.

5.2.2 Tree Survey Schedule Key

Table 5-2: Tree Survey Schedule Key

Parameters Assessed	Details
Tree ID	‘T’ denotes Tree, ‘G’ denotes Tree Group. The Tree ID’s are based on the numbers inputted into the Field Maps ID. As different parts of the site were visited on different dates and for some trees within the site only a basic tree survey was carried out, the numbering is not consecutive. Where existing tree tags were present on trees, the numbers of these are provided in brackets.
Species	Botanical and common name.
Height	Measured using a clinometer. Measured to the nearest half metre up to 10 m height and nearest whole metre over 10 m.
Stem Diameter	Measured at 1.5 m above ground level. For multi-stem trees each stem diameter is recorded. For trees with 2-5 stems the overall diameter is calculated by squaring each stem diameter, adding these figures together and square rooting the result. For trees with more than 5 stems the mean stem diameter is squared and multiplied by the number of stems. The result is then square rooted to give the overall diameter. The results of the calculations for multi-stemmed trees are shown in bold and in brackets on the schedule. Where the tree is inaccessible due to vegetation or obstacles then the stem diameter has been estimated.

Parameters Assessed	Details
RPA Radius	The Root Protection Area (RPA) is calculated using the stem diameter. The RPA is an area equivalent to a circle with a radius 12 times the stem diameter for a single stem tree. BS 5837:2012 limits the maximum RPA to 707 square metres (m²), i.e. equivalent to a circle with a radius of 15 m or a square with approximately 26 m sides. For veteran/ancient trees the current advise is that the RPA for a single stem tree should be an area equivalent to a circle with a radius 15 times the stem diameter or 5 m beyond the tree canopy, whichever is the greater.
Branch Spread	Measured at the four cardinal points to derive an accurate representation of the crown and is recorded on the tree survey plan. Where the tree is inaccessible due to vegetation or obstacles then the branch spreads have been estimated. Measured to the nearest half metre up to 10 m spread and nearest whole metre over 10 m. Direction measured using a compass.
Life Stage	Young (Y): Newly planted tree 0-10 years. 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) Mature (M): Tree in the final third of its normal life expectancy for the species (having typically reached its approximate ultimate size). Over Mature (OM): Tree beyond the normal life expectancy for the species. Veteran (V): Tree, which is of interest biologically, aesthetically or culturally because of its condition, size or age.
General Observations	Particularly of structural and/or physiological condition (e.g. the presence of any decay and physical defect) and/or preliminary management recommendations. External features assessed based upon – The Body Language of Trees, Research for Amenity Trees No 4. (Mattheck and Breloer, 1994).
Category Grading	Recorded on the tree survey plans and schedule. See Section 5.3 for Cascade Chart for Tree Quality Assessment. British Standard (BS) 5837 (2012), “Trees in relation to design, demolition and construction – Recommendations”. Occasionally trees are given more than one category grading, where trees will otherwise be categorised as U, but have identifiable conservation, heritage or landscape value, even though only for the short term, they may be upgraded, although they might be suitable for retention only where issues concerning their safety can be appropriately managed. A – Trees of high quality with an estimated remaining life expectancy of at least 40 years. (Shown as green on the tree survey plans). B – Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. (Shown as blue on the tree survey plans). C – Trees of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150 mm. (Shown as grey on the tree survey plans). U – Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years. (Shown as red on the tree survey plans). Note: The category grading for a group of trees does not necessarily imply that the individual trees within that group are the same grading. The group is viewed as a whole and individual trees within it may have a lower grading. 1 – Mainly arboriculture qualities. 2 – Mainly landscape qualities.

Parameters Assessed	Details
	3 – Mainly cultural values, including conservation
Notes	Trees can be grouped if they form cohesive arboricultural features either aerodynamically (e.g. trees that provide companion shelter), visually (e.g. avenues or screens) or culturally, including for biodiversity (e.g. parkland or woodland pasture). The category grading for a group of trees does not necessarily imply that the individual trees within that group are the same grading. The group is viewed as a whole and individual trees within it may have a lower grading.
#	Estimated dimensions

Table 5-3: Cascade Chart of Tree Quality Assessment (Taken from BS 5837:2012)

Table 1 **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see **4.5.7**.*			See Table 2
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

5.2.3 Tree Survey Schedule

Table 5-4: Tree Survey Schedule

Refer to the Tree Survey Results Mapping in Appendix B, for the tree locations and associated tree protection zones (i.e. prohibited zone and precautionary zone, refer to section 1.3).

ID	Species	Height (m)	Trunk dia. (mm)	RPA Radius (m)	Branch Spread (m)				Crown Clearance		Life Stage	General observations, including structural and physiological conditions and any preliminary management recommendations.	Estimated remaining years	Category
					N	E	S	W	Height of 1st branch (m) and direction	Height of canopy (m)				
T117	*Acer pseudoplatanus* (Sycamore)	18	1030	12.4	7.5	7	7	7	3 – N	2	M	No obvious significant defects. Some dieback in upper crown	40+	A1
T118 (0625)	*Quercus robur* (English oak)	12	320	3.8	4.5	4.5	4.5	5	2 – W	0.5	SM	No obvious significant defects. Some leaf discoloration/presence of mildew; some deadwood present in crown.	40+	B1
T119 (0624)	*Quercus robur* (English oak)	12	320	3.8	4	4.5	5	3	1.8 – S	0.5	SM	No obvious significant defects. Some leaf discoloration/presence of mildew; some deadwood present in crown.	40+	B1
T120 (0623)	*Quercus robur* (English oak)	18	1320	15	8.5	8	10	9	2 – W	1.5	M	No obvious significant defects. Some leaf discoloration/presence of galls; some deadwood present in crown.	40+	A1
T121	*Tilia sp.* (Lime)	13	1320	15	6	6	6	6#	4 – W	0	M	Original main stem broke out at ca. 8 m height. Replaced by many smaller branches with possibly weak attachments. Good physiological condition.	40+	B1
T122	*Quercus sp.* (Oak)	5.5	80 70	1.3	2.5	2	2.5	2	1 – E	0.2	SM	No obvious significant defects.	40+	B1

ID	Species	Height (m)	Trunk dia. (mm)	RPA Radius (m)	Branch Spread (m)				Crown Clearance		Life Stage	General observations, including structural and physiological conditions and any preliminary management recommendations.	Estimated remaining years	Category
					N	E	S	W	Height of 1st branch (m) and direction	Height of canopy (m)				
			(110)									Some leaf discoloration/small leaves.		
T123	*Betula pendula* (Silver Birch)	15	270	3.2	3	3	3	3	4 – N	1	EM	No obvious significant defects. Some leaf discoloration.	20+	B1
T124	*Betula pendula* (Silver Birch)	11	230	2.8	2	3	2.5	2.5	2.5 – SW	0.2	EM	50cm long wound on SW side of stem, from 1 m above ground, heartwood exposed. Some leaf discoloration. Monitor for rot in stem.	20+	B1
T128 (0628)	*Tilia sp.* (Lime)	15	470	5.6	5.5	4.5	4	4	2.5	0.2	EM	No obvious significant defects. Some deadwood in crown.	20+	B1
T129	*Tilia sp.* (Lime)	22	1000 #	12	7	6	6	6	3 – W	0	M	No obvious significant defects, however dense epicormic growth obscuring base. Some dieback in upper crown and some leaf discoloration.	40+	B1
T200 (7982)	*Metasequoia glyptostroboides* (Dawn Redwood)	9	260	3.1	3	3	3	2	1.5 – S	0.3	SM	No obvious significant defects.	40+	B1
T201 (7983)	*Tilia sp.* (Lime)	11	450	5.4	5	6	5	5	2.5 – N	0	EM	No obvious significant defects. Some deadwood in lower crown.	40+	B1
T202 (7992)	*Salix sp.* (Willow)	20	1030	12.4	10	13	9	9	1.5 – E	0	M	No obvious significant defects, however stem obscured by ivy. Not fully surveyed. Some deadwood present in crown.	20+	B1

ID	Species	Height (m)	Trunk dia. (mm)	RPA Radius (m)	Branch Spread (m)				Crown Clearance		Life Stage	General observations, including structural and physiological conditions and any preliminary management recommendations.	Estimated remaining years	Category
					N	E	S	W	Height of 1st branch (m) and direction	Height of canopy (m)				
T209 (7984)	*Metasequoia glyptostroboides* (Dawn Redwood)	12	540	6.5	5	7	6	5	2 – S	0	SM	No obvious significant defects. Some deadwood present in crown.	40+	B1
T210 (8014)	*Cedrus libani* (Cedar of Lebanon)	21	1020	12.2	6#	8	11	8	8 – W	7	M	No obvious significant defects. Hydrant attached to stem.	40+	A1
T211 (8015)	*Aesculus hippicastanum* (Horse chestnut)	13	890	10.7	5	5.5	6	5	4 – E	4	M	Several large wounds with poor occlusion where large branches were cut. Leaf miner and leaf blotch present, affecting tree vitality.	20+	B1

6.0 Assessment of Impact on Trees and Protection/Mitigation Recommendations

6.1 Impact of ECR on surveyed trees

As described in section 1.3, the potential impact of the ECR on the existing trees was assessed, with reference to the Tree Protection Zones, based on NJUG Volume 4, 2007. Using professional judgement and a precautionary approach the trees were thus categorised into three levels of potential impact. Refer to section 6.1.1-6.1.3 for a description of the selection criteria.

Please note that this assessment is based on the alignment of the onshore ECR, as shown on the planning drawings. The proposed tree protection/mitigation recommendations will be adjusted, as required, based on the final alignment of the onshore ECR, following the completion of utility surveys and advanced detail design.

A traffic light system was used to clearly colour code the impact level for each tree recorded on both the Basic Tree Survey Schedule in Appendix A and the Tree Survey Results Mapping in Appendix B.

Table 6-1 illustrates this traffic light system and states the total number of surveyed trees placed into each category. The table further lists the Recommendation Category that applies to the trees within each impact level, as detailed further in section 6.2.

Table 6-1: Impact Level and associated Recommendation Category

Colour Code	Impact Level	Recommendation Category	No. of trees assigned
Green	Trees not affected by the ECR	• **Category 1: General Recommendations** (refer to section 6.2)	**169**
Orange	Trees potentially affected by the ECR	• **Category 1: General Recommendations** (refer to section 6.2) • **Category 2: Protection Recommendations** (refer to section 6.3)	**123**
Red	Trees requiring removal	• **Category 3: Mitigation Recommendations** (refer to section 6.3)	**17**
			Total trees recorded: 309

6.1.1 Selection criteria for trees not affected by the ECR

A total of 169 of the trees surveyed were assessed as not predicted to be affected by the works associated with the onshore ECR. This is due to the trees and their associated prohibited zones and precautionary zones being located outside the working corridor along the ECR, the joint bays and/or TCCs. While it is acknowledged that some of the trees' roots are likely to be present outside the precautionary zone, any damage to the roots, due to the installation of the onshore ECR, is unlikely to affect the future health/vitality and stability of the trees. This is in accordance with BS 5837:2012 and NJUG Volume 4, 2007.

6.1.2 Selection criteria for trees potentially affected by the ECR

A total of 123 of the trees surveyed were assessed and identified as being potentially affected by the construction of the onshore ECR.

It is acknowledged that the default position for utility installations is that all construction activities should be located outside of the precautionary zone/RPA of nearby trees. However, due to the numerous competing constraints present along the onshore ECR (such as existing underground utilities and surrounding residential areas), it was not possible to adjust the cable alignment and associated working corridor, including the location of joint bays and TCCs, to avoid all trees.

The trees assigned to this impact level were selected for one or more of the following reasons:

- **The working corridor along the ECR, associated joint bays or HDD entry/exit pits are located in close proximity to the precautionary zone of the trees**. This allows for potential slight inaccuracies on the mapping, regarding the location of trees and varying width of the working corridor along the ECR.
- **The working corridor along the ECR or associated joint bays or HDD entry/exit pits are encroaching the precautionary zone of the trees**. Trees with an encroachment of up to ca. 40% of the total precautionary zone were included (note: trees with an encroachment of more than 40% are assessed as requiring removal, see section 6.1.3). This allows for potential slight inaccuracies on the mapping, regarding the location of trees and varying width of the working corridor along the ECR. It also allows for the fact that roots do not typically spread out equally in all directions from the base of a tree, depending on the local ground conditions. This is particularly the case for street trees, the roots of which are less likely to be prolific under a sealed road surface. In order to prevent a worst case scenario, and pursue a more sustainable approach, case-by-case assessment and monitoring is proposed. This will be achieved through the monitoring of any excavation works within the precautionary zone of trees by a suitably qualified arboriculturist, as set out further in section 6.2.2.
- **The Clifton Park TCC along the ECR is located in close proximity or encroaching the precautionary zone of the trees**. There is a potential for compaction of the ground, caused by the operation of plant/machinery or storage of material within the precautionary zones of these trees. Also, there is a potential for above ground damage to the tree stems and branches by the operation of plant/machinery or presence of storage containers/welfare facilities nearby.

6.1.3 Selection criteria for trees to be removed

A total of 17 trees were identified which will require removal to facilitate the onshore ECR. This is either the result of parts of the construction works encroaching on the prohibited zone associated with the trees or where a large portion of the precautionary zone is affected (ca. 40+ %. Due to this substantial encroachment, the health/vitality and/or anchorage of these trees is likely to be impaired to such an extent that they will become a health and safety hazard. As with the trees in category 2, it was not possible to reroute the ECR, in this case to avoid their removal, due to other constraints.

6.2 Tree Protection/Mitigation Recommendations

The services of a suitably qualified arboriculturist will be retained for the duration of construction works where there is potential for trees to be affected, to support the implementation of all recommendations made.

Prior to the commencement of construction works that could affect trees within a particular location, the arboriculturist will produce a bespoke Arboricultural Method Statement (AMS) for that location. The AMS will be prepared in accordance with the requirements of

BS5837:2012. Section 7.0 of this report sets out the key elements that will be covered by the AMS .

6.2.1 Category 1: General Recommendations for All trees

A minimum level of tree protection measures will be afforded to all surveyed and identified trees in the vicinity (i.e. within 20 m) of the ECR, independent from the impact levels they were assigned to.

BS 5837:2012 recommends the erection of protective barriers to form a Construction Exclusion Zone (CEZ), *"based on the root protection area … from which access is prohibited for the duration of the project"*.

Due to the progressive nature of the works associated with the installation of the onshore ECR, i.e. daily changing work locations, the installation of solid barriers, as per the default specification in BS 5837:2012 (refer to Appendix C) is not practicable. Nevertheless, the same principals of protection will apply, as if a physical barrier was installed.

Key persons and contractors who could be working along the onshore ECR in areas where there is potential for impact on trees to occur, will receive training by the appointed arboriculturist (e.g. via a tool box talk) on commencement of the construction works. This training, as a minimum, will cover how trees are potentially damaged (above ground and below ground) and the specific protection measures confirmed within the AMS.

Regular planning by the construction team and the Arboriculturist will be undertaken in advance of scheduled works to review the programme of work and to ensure damage by machinery is avoided to the RPAs the stems and branches of trees to be retained along the ECR.

In locations which are identified, to require additional protection, suitable barriers will be installed (in accordance with section 6.2.2.3 of BS 5837:2012.

6.2.2 Category 2: Protection Recommendations for potentially affected trees

6.2.2.1 Monitoring of excavation works along the onshore ECR

The appointed arboriculturist will be present and monitor any excavation works where roots within the precautionary zone/RPA of trees could be affected along the ECR. The monitoring will seek to determine the amount and size of tree roots present and the extent of severance within the area excavated.

An assessment will be made of the future viability of any trees that would incur damage to roots. Tree health, viability and stability will be dependent on the volume of root that would be removed, tree species and local context.

Depending on the findings the following approaches will be taken:

- **Trees considered unviable in the future:** Where a tree's health/vitality is considered to be severely impacted arising from tree root damage and/or the tree is likely to become a health and safety hazard, due to reduced anchorage, it will be recorded and removed within 4 – 6 weeks of the excavation works taking place. The number of trees requiring removal will be reported to the local authority, prior to the works taking place. Replacement planting will be undertaken, in accordance with the DLRCC Tree Strategy 2024-2030 (refer to section 6.2.3). The number, species and location for replacement trees will be agreed with DLRCC.
- **Trees considered viable in the future:** The trees that are considered to be able to withstand the amount of tree roots lost, without significant impact on their

heath/vitality and / or stability will be retained. A monitoring and management plan for each retained tree will be prepared appropriate to the amount of tree roots lost. Measures included in the plan may include soil improvement to foster regrowth of roots, tree pruning to counter balance the loss of roots and long-term monitoring for signs of declining health or stability.

Under supervision from the arboriculturist, any severed roots will be pruned back with a clean cut and any exposed roots will be wrapped to prevent them from drying out. The wrapping will stay in place whilst the roots are exposed. Suitable material will be placed around the roots when the trench is back-filled. These works will be undertaken in line with section 7.2 of BS 5837:2012 (Avoiding physical damage to the roots during demolition or construction).

6.2.2.2 Protection of trees adjoining TCCs

The layout of the Clifton Park TCC, and the trenchless crossing compounds will be designed in liaison with the appointed arboriculturist. Where feasible the layout of the TCC will aim to avoid the precautionary zones/RPAs and canopy spread of adjoining trees. The following measures will be applied, as appropriate:

- **Tree Protection Fencing:** Where TCCs are located adjacent or in very close proximity to precautionary zones/RPAs, the TCC fencing (including noise barrier fencing), can be used in-lieu of tree protection fencing (as specified in BS5837:2012). Where this is used, appropriate signage identifying an exclusion zone for tree protection purposes will be displayed. Additional fencing may be required, as directed by the appointed arboriculturist.
- **Ground Protection Measures:** Where encroachment into the precautionary zones/RPAs is unavoidable, alternative protection arrangements such as ground protection (sufficient to protect the structure of the soil from compaction) may be required. This will be designed in accordance with the requirements of section 6.2.3 of BS5837:2012.
- **Canopy Protection Measures:** Above ground equipment (such as containers, drill rigs and noise attenuation fencing), should be arranged to avoid damage to the canopies of existing trees. Where this is not possible, pruning to facilitate access for plant and equipment may be required as advised by the appointed arboriculturist.

Two of the TCCs have a large number of trees nearby and require additional consideration:

- **Clifton Park TCC (Sector 1):** The following potential considerations will be addressed by measures in the AMS which will be informed by detailed design:
    - The eastern boundary of the Clifton Park TCC is in close proximity to an established tree line which is located along the DART railway line. The current plan indicates that part of the TCC is likely to be within the precautionary zone/RPA of the trees. The AMS will specify suitable ground protection measures prior to any plant or machinery operating in this area.
    - Any variation in the TCC location will require consideration of the precautionary zone/RPA of the trees along Shanganagh River.
- **The TCC surrounding the trenchless crossing entry pit within Eurofound grounds:** The TCC at Eurofound which will facilitate the trenchless crossing to undertake the N11 crossing is located in proximity to several large high-quality trees. The following potential considerations will be addressed by measures in the AMS which will be informed by detailed design:
    - Ground compaction from the operation/storage of plant and machinery within the compound and along the access route into it. The AMS will specify

suitable ground protection measures prior to any plant or machinery operating in this area

- Encroachment into the precautionary zone/RPA of some trees, due to the excavations at the HDD entry pit. The HDD bore itself is unlikely to impact on tree roots, as it will be buried more than 60 cm below ground within a short distance of the entry pit. The AMS will specify suitable root protection measures, should these be required.
- Above ground impact on the tree canopies, in particular due to the proposed noise attenuation fencing along the northern, western and eastern boundary of this TCC. The fencing can function as a protective barrier around the RPAs of trees if sited carefully). Suitable canopy protection measures will be confirmed within the AMS.

6.2.3 Category 3: Trees to be removed and proposals for replacement planting

The survey identified a total of 17 trees that will require removal to facilitate the onshore ECR. This is due to parts of the construction works encroaching on the prohibited zone associated with these trees or a large portion of the precautionary zone being affected (ca. 40+ %). In the case of these trees, it was not possible to reroute the ECR to avoid their removal (due to other constraints).

Table 6-2 identifies the trees that will need to be removed, alongside replacement planting proposals. These proposals are in accordance with policy 10 of the DLR Tree Strategy 2024-2030.

"The Council encourage new and replacement planting of trees on development sites and recommend that new plantings are in line with the above table or attempt to achieve a target of 18% canopy cover along with government and council canopy cover targets."

Please note that the table referenced in the above quote from the DLR Tree Strategy 2024-2030 sets out the number of replacement trees required depending on the trunk diameter of the lost tree (e.g. trunk diameter less than 15 cm = 1 replacement tree/tree lost; trunk diameter between 15-19.9 cm = 2 replacement trees/tree lost).

Table 6-2: Trees to be removed and proposals for replacement planting

Tree IDs	Trees to be removed and proposals for replacement planting	Trunk diameters	No. of replacement trees
0038-0039	Two young Rowan in the public green space west of Shanganagh Road, and north of the entrance to Cromlech Fields; one in a poor and one in a fair condition: Trees to be replaced like for like; Rowan within the public green space, at a minimum distance of 3 m from the edge of the trench associated with the underground circuits.	8 cm & 9 cm	**2**
0062, 00670069 & 0073	Four early-mature ash trees and one early-mature sycamore, are located within the hedgerow west of Shanganagh Road. The ash trees were all affected by ash dieback disease and sycamore was in a fair condition: The trees will be replaced with a mix of native light standard trees (6-8 cm girth e.g. rowan, oak, hawthorn) in suitable locations along the hedgerow, the public green space to the west or another suitable location to be agreed with the local authority. Planting will be a minimum	4 x 20 cm 1 x 45 cm	**17**

Tree IDs	Trees to be removed and proposals for replacement planting	Trunk diameters	No. of replacement trees
	distance of 3 m from the edge of the trench associated with the underground circuits.		
0288-0289 0300 & 0302-0303	Five early-mature maples along the footpath in Loughlinstown Linear Park. Trees requiring removal; all in a fair condition with small/discoloured leaves: To be replaced with a mix of native light standard trees (6-8 cm girth e.g. rowan, oak, hawthorn) in suitable locations within Loughlinstown Linear Park or another suitable location in consultation with DLRCC. To be planted a minimum distance of 3 m from the edge of the trench associated with the underground circuits.	4 x 17 cm 1 x 20 cm	**11**
0200	One semi-mature dawn redwood at the Eurofound site in a good condition. It will be attempted to relocate this tree within the Eurofound site (e.g. using a tree spade), rather than simply removing it. In addition, three replacement light standard trees (6-8 cm girth) will be planted within the Eurofound site. The species and location of these trees will be agreed with the Eurofound management.	26	**3**
0246-0248	One early-mature willow and two young whitebeam and ash in the public open space south of the R118 and west of the N11. Willow and ash in a fair condition (ash affected by ash dieback disease) and the whitebeam in a good condition: To be replaced with a mix of native light standard trees (6-8 cm girth; e.g. rowan, oak, hawthorn, willow) in suitable locations within the public open space or another suitable location to be agreed with the local authority. To be planted a minimum distance of 3 m from the edge of the trench associated with the underground circuits.	30 cm 2 x 10 cm	**6**
0280	One early-mature ash in the hedgerow along Glenamuck road; in a fair condition (affected by ash dieback disease): To be replaced with a mix of native light standard trees (6-8 cm girth; e.g. rowan, oak, hawthorn) in a suitable location along the existing hedgerow or another suitable location to be agreed with the local authority. To be planted a minimum distance of 3 m from the edge of the trench associated with the underground circuits	30 cm	**4**
			Total number of replacement trees: 43

6.2.3.1 Tree Planting

Replacement planting will be located in open green space that is under the control of DLRCC and will be agreed with DLRCC in advance of tree removal alongside the quantity, location, tree size and species to be used. The aim will be for replacement planting to be undertaken in the first planting season following the removal of each of the groups of trees upon completion of construction.

The same details for tree planting which will be undertaken to replace existing trees at Eurofound and detail of the quantity, location, tree size and species to be used will be agreed with Eurofound in advance of any tree removal.

New planting will consider the existing species mix present within the survey area in relation to both arboricultural and ecological considerations. New planting offers an opportunity to increase the species and age class diversity for a given area which can boost the resilience of the local tree stock in relation to pests, disease and climate change as well as providing a greater range of amenity and other benefits.

New trees will be planted in accordance with the minimum distances from new structures, services and surfacing set out in Table A.1 of BS 5837:2012. Tree stock selection, planting methods and planned maintenance will follow guidance as set out in BS 8545:2014 Trees: from nursery to independence in the landscape.

7.0 Arboricultural Method Statement

Prior to the commencement of construction works that could affect trees within a particular location along the ECR, an Arboricultural Method Statement (AMS) will be developed for that location in accordance with *BS 5837:2012. Trees in relation to design, demolition and construction – Recommendations.*

The objective of the AMS will be to inform the construction/development process and protect retained trees during the construction phase. The AMS will be informed by detailed design and produced by a suitably qualified arboriculturist in liaison with the contractor undertaking the works. The AMS will consider the following key elements as a minimum:

- Protective Fencing
    - Location and specification of Tree Protection Fencing (in line with BS 5837:2012)
    - Location and specification of alternative protective fencing, if required
    - Details of appropriate signage demarcating tree protection areas
- Construction Exclusion Zones (CEZ)
    - Location of CEZ including detail of suitable demarcation and restrictions that will be in place within these areas during construction
- Temporary Ground Protection
    - Location and detail of temporary ground protection measures to prevent soil compaction around tree roots
- New Permanent Surfacing within RPAs
    - Location and detail of any new surfacing within RPAs
- Canopy Protection
    - Details of measures to avoid damage to tree canopies including staff awareness and pruning to facilitate access for plant and equipment if required.
- Use of Hazardous Materials
    - Measures to prevent accidental release of materials hazardous to tree roots within RPAs

8.0 References

British Standards Institution (BSI). 2010. *BS 3998:2010. Trees Work – Recommendations*. London: British Standards Institution. 3rd ed. [hard copy] London: British Standards Institution.

British Standards Institution (BSI). 2012. *BS 5837:2012. Trees in relation to design, demolition and construction – Recommendations*. 4th ed. [ebook] London: British Standards Institution.

Department of Agriculture Food and the Marine (DAFM) & Tree Council of Ireland (TCI). 2021. *A Guide for Landowners to Managing Roadside Trees.* [online], available: https://www.gov.ie/en/publication/8fb45-a-guide-for-landowners-to-managing-roadside-trees/ [accessed 14 Jan 2025]

Dún Laoghaire-Rathdown County Council. 2024. *A Climate for Trees – Tree Strategy 2024-2030.* [online], available: Trees and Urban Forestry Strategy 2024-2030 | Dún Laoghaire-Rathdown County Council [accessed 30 Jan 2025]

Lonsdale, D., 1999. *Principles of tree hazard assessment and management*. London: TSO.

Mattheck, C. and Breloer, H., 1994. *The body language of trees*. London: Stationery Office.

National Joint Utilities Group (NJUG). 2001. *Volume 4 NJUG guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees.* [online], available: https://streetworks.org.uk/wp-content/uploads/V4-Trees-Issue-2-16-11-2007.pdf [accessed 14 Jan 2025]

National Tree Safety Group. 2011. *Common sense risk management of trees*. Edinburgh: Forestry Commission.

9.0 Closure

This report has been prepared by SLR Consulting Limited with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client.

This report should be used for information purposes only and should not be construed as a comprehensive characterisation of all site conditions.

This report is for the exclusive use of the Applicant and their exclusive agents; no warranties or guarantees are expressed or should be inferred by any third parties. Any such party relies upon the report at their risk.

SLR disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

If you have any queries regarding the above works, please do not hesitate to contact the undersigned.

Regards,

SLR Environmental Consulting (Ireland) Ltd

Anne Merkle MSc,
MILI, TechArborA
Principal Landscape Architect - Arboriculturist

Appendix A Basic Tree Survey Schedule

Dublin Array Offshore Wind Farm

Volume 6, Technical Appendix 6.5.7-2: Tree Survey Report

Kish Offshore Wind Limited

SLR Project No.: 501.065303.00001

January 2025

Sector	Tree ID	Botanical Name	Common Name	Stem Diameter (mm)	RPA (m)	Notes	Impact of ECR
Sector 1	0001	*Populus sp.*	Poplar	410	4.9	Fair; slight lean	Potentially affected
Sector 1	0002	*Populus sp.*	Poplar	700	8.4	Fair; slight lean	Potentially affected
Sector 1	0003	*Fraxinus excelsior*	Ash	800	9.6	Fair; ash dieback	Not affected
Sector 1	0004	Acer sp.	Maple	360	4.3	Good	Not affected
Sector 1	0005	Acer sp.	Maple	290	3.5	Good	Not affected
Sector 1	0006	Acer sp.	Maple	410	4.9	Good	Not affected
Sector 1	0007	Acer sp.	Maple	410	4.9	Good	Not affected
Sector 1	0008	Acer sp.	Maple	360	4.3	Fair; large wound on trunk	Not affected
Sector 1	0009	*Populus sp.*	Poplar	610	7.3	Good	Not affected
Sector 1	0010	*Populus sp.*	Poplar	570	6.8	Good	Not affected
Sector 1	0011	*Populus sp.*	Poplar	370	4.4	Good	Not affected
Sector 1	0012	*Populus sp.*	Poplar	430	5.2	Good	Not affected
Sector 1	0013	*Populus sp.*	Poplar	500	6	Good	Not affected
Sector 1	0014	*Populus sp.*	Poplar	520	6.2	Good	Not affected
Sector 1	0015	*Betula pendula*	Silver birch	300	3.6	Good	Not affected
Sector 1	0016	*Malus sp.*	Apple	110	1.3	Fair; mildew/rust on leaves	Not affected
Sector 1	0017	*Malus sp.*	Apple	120	1.4	Fair; mildew/rust on leaves	Not affected
Sector 1	0018	*Betula pendula*	Silver birch	340	4	Fair; small/discoloured leaves	Potentially affected
Sector 1	0019	*Sorbus aria*	Whitebeam	350	4.2	Good	Potentially affected
Sector 1	0020	*Malus sp.*	Apple	250	3	Fair; discoloured leaves	Not affected
Sector 1	0021	*Betula pendula*	Silver birch	320	3.8	Fair; small/discoloured leaves	Not affected
Sector 1	0022	*Betula pendula*	Silver birch	250	3	Good; on private ground	Not affected
Sector 1	0023	*Malus sp.*	Apple	140	1.7	Fair; discoloured leaves	Not affected
Sector 1	0024	*Betula pendula*	Silver birch	200	2.4	Fair; discoloured leaves	Not affected
Sector 1	0025	*Aesculus hippocastanum*	Horse chestnut	490	5.9	Fair; leaf miner	Potentially affected
Sector 1	0026	*Betula pendula*	Silver birch	360	4.3	Good	Not affected
Sector 1	0027	*Betula pendula*	Silver birch	550	6.6	Good	Potentially affected
Sector 1	0028	*Betula pendula*	Silver birch	330	4	Good	Potentially affected
Sector 1	0029	*Betula pendula*	Silver birch	390	4.7	Fair; small/discoloured leaves	Potentially affected
Sector 1	0030	*Sorbus aucuparia*	Rowan	220	2.6	Good	Potentially affected
Sector 1	0031	*Betula pendula*	Silver birch	270	3.2	Fair; small/discoloured leaves	Potentially affected
Sector 1	0032	*Betula pendula*	Silver birch	380	4.6	Fair; large wound on trunk	Potentially affected
Sector 1	0033	*Betula pendula*	Silver birch	310	3.7	Fair; discoloured leaves	Potentially affected
Sector 1	0034	*Betula pendula*	Silver birch	430	5.2	Good	Not affected
Sector 1	0035	*Prunus sp.*	Cherry	80	1	Good	Potentially affected
Sector 1	0036	*Prunus sp.*	Cherry	80	1	Good	Potentially affected
Sector 1	0037	*Prunus sp.*	Cherry	50	0.6	Poor; very sparse crown, dying	Potentially affected
Sector 1	0038	*Sorbus aucuparia*	Rowan	90	1.1	Fair; leaning to E	Requires Removal
Sector 1	0039	*Sorbus aucuparia*	Rowan	80	1	Good	Requires Removal
Sector 1	0040	*Sorbus aucuparia*	Rowan	100	1.2	Good	Potentially affected
Sector 1	0041	*Acer pseudoplatanus*	Sycamore	410	4.9	Good	Not affected
Sector 1	0042	*Prunus sp.*	Cherry	250	3	Good	Not affected
Sector 1	0043	*Prunus sp.*	Cherry	70	0.8	Good	Not affected
Sector 1	0044	*Prunus sp.*	Cherry	90	1.1	Good	Not affected
Sector 1	0045	*Prunus sp.*	Cherry	70	0.8	Good	Not affected
Sector 1	0046	*Aesculus hippocastanum*	Horse chestnut	350	4.2	Fair; leaf miner; on private ground	Not affected
Sector 1	0048	*Aesculus hippocastanum*	Horse chestnut	350	4.2	Fair; leaf miner; on private ground	Not affected
Sector 1	0049	*Acer sp.*	Maple	400	4.8	Good; on private ground	Not affected
Sector 1	0050	*Tilia sp.*	Lime	280	3.4	Fair; large wound on trunk	Not affected
Sector 1	0051	*Acer sp.*	Maple	300	3.6	Fair; discoloured leaves; on private ground	Not affected
Sector 1	0052	*Acer sp.*	Maple	350	4.2	Fair; many pruning wounds; on private ground	Not affected
Sector 1	0053	Acer sp.	Maple	350	4.2	Fair; discoloured leaves; on private ground	Not affected
Sector 1	0054	*Fraxinus excelsior*	Ash	300	3.6	Fair; ash dieback; on private ground	Not affected
Sector 1	0055	Acer sp.	Maple	400	4.8	Fair; discoloured leaves; on private ground	Not affected
Sector 1	0056	Acer sp.	Maple	300	3.6	Fair; discoloured leaves; on private ground	Not affected
Sector 1	0057	*Acer pseudoplatanus*	Sycamore	500	6	Good	Not affected
Sector 1	0058	*Crataegus monogyna*	Hawthorn	200	2.4	Fair; discoloured leaves	Not affected
Sector 1	0059	*Crataegus monogyna*	Hawthorn	200	2.4	Fair; sparse crown	Not affected
Sector 1	0060	*Crataegus monogyna*	Hawthorn	150	1.8	Good; several interlinked trees	Potentially affected
Sector 1	0061	*Acer pseudoplatanus*	Sycamore	300	3.6	Good	Potentially affected
Sector 1	0062	*Fraxinus excelsior*	Ash	450	5.4	Fair; ash dieback	Requires Removal

Sector 1	0063	*Fraxinus excelsior*	Ash	300	3.6	Fair; ash dieback	Potentially affected
Sector 1	0064	*Fraxinus excelsior*	Ash	300	3.6	Fair; ash dieback; two similar trees nearby	Potentially affected
Sector 1	0065	*Fraxinus excelsior*	Ash	350	4.2	Fair; ash dieback	Potentially affected
Sector 1	0066	*Fraxinus excelsior*	Ash	200	2.4	Fair; ash dieback; one similar tree nearby	Potentially affected
Sector 1	0067	*Fraxinus excelsior*	Ash	200	2.4	Poor; severe ash dieback	Requires Removal
Sector 1	0068	*Fraxinus excelsior*	Ash	200	2.4	Fair; ash dieback; one similar tree nearby	Requires Removal
Sector 1	0069	*Fraxinus excelsior*	Ash	200	2.4	Fair; ash dieback; one similar tree nearby	Requires Removal
Sector 1	0070	*Fraxinus excelsior*	Ash	200	2.4	Fair; ash dieback	Potentially affected
Sector 1	0071	*Fraxinus excelsior*	Ash	400	4.8	Fair; ash dieback	Potentially affected
Sector 1	0072	*Crataegus monogyna*	Hawthorn	200	2.4	Fair; small leaves	Potentially affected
Sector 1	0073	*Acer pseudoplatanus*	Sycamore	200	2.4	Fair; discoloured leaves	Requires Removal
Sector 1	0074	*Acer pseudoplatanus*	Sycamore	100	1.2	Good; several smaller trees nearby	Potentially affected
Sector 1	0075	*Fraxinus excelsior*	Ash	150	1.8	Fair; ash dieback; two similar trees nearby	Potentially affected
Sector 1	0076	*Fraxinus excelsior*	Ash	100	1.2	Fair; ash dieback	Potentially affected
Sector 1	0077	*Acer pseudoplatanus*	Sycamore	150	1.8	Good	Potentially affected
Sector 1	0078	*Acer sp.*	Maple	310	3.7	Good	Not affected
Sector 1	0079	*Tilia sp.*	Lime	400	4.8	Fair; discoloured leaves	Not affected
Sector 1	0080	*Acer pseudoplatanus*	Sycamore	200	2.4	Good	Not affected
Sector 1	0081	*Acer pseudoplatanus*	Sycamore	250	3	Good	Not affected
Sector 1	0082	*Fraxinus excelsior*	Ash	600	7.2	Fair; ash dieback	Not affected
Sector 1	0083	*Sambucus nigra*	Elder	250	3	Fair; discoloured leaves	Not affected
Sector 1	0084	*Fraxinus excelsior*	Ash	280	3.4	Fair; ash dieback	Not affected
Sector 1	0085	*Crataegus monogyna*	Hawthorn	100	1.2	Fair; discoloured leaves	Not affected
Sector 1	0086	*Fraxinus excelsior*	Ash	360	4.3	Good	Not affected
Sector 1	0087	*Acer sp.*	Maple	370	4.4	Good	Not affected
Sector 1	0088	*Fraxinus excelsior*	Ash	340	4.1	Fair; ash dieback	Not affected
Sector 1	0089	*Fraxinus excelsior*	Ash	200	2.4	Fair; ash dieback	Not affected
Sector 1	0090	*Ulmus sp.*	Elm	300	3.6	Fair; wilted leaves at branch tips; on private ground	Not affected
Sector 1	0091	*Fraxinus excelsior*	Ash	650	7.8	Fair; ash dieback	Not affected
Sector 1	0092	*Ulmus sp.*	Elm	400	4.8	Good	Not affected
Sector 1	0093	*Prunus sp.*	Cherry	200	2.4	Fair; sparse crown	Not affected
Sector 1	0180	*Fraxinus excelsior*	Ash	560	6.7	Sample tree along railway line to give indication of typical extent of RPA	Potentially affected
Sector 1	0181	*Acer pseudoplatanus*	Sycamore	340	4.1	Sample tree along railway line to give indication of typical extent of RPA	Potentially affected
Sector 1	0182	*Fraxinus excelsior*	Ash	400	4.8	Sample tree along railway line to give indication of typical extent of RPA	Potentially affected
Sector 1	0183	*Acer pseudoplatanus*	Sycamore	390	4.7	Sample tree along railway line to give indication of typical extent of RPA	Potentially affected
Sector 1	0184	*Fraxinus excelsior*	Ash	500	6	Sample tree along Shanganagh Stream to give indication of typical extent of RPA	Not affected
Sector 1	0185	*Acer pseudoplatanus*	Sycamore	500	6	Sample tree along Shanganagh Stream to give indication of typical extent of RPA	Not affected
Sector 1	0186	*Fraxinus excelsior*	Ash	120	1.4	Sample tree along Shanganagh Stream to give indication of typical extent of RPA	Not affected
Sector 1	0187	*Alnus sp.*	Alder	100	1.2	Sample tree along Shanganagh Stream to give indication of typical extent of RPA	Not affected
Sector 1	0188	*Quercus sp.*	Oak	800	9.6	Sample tree along Shanganagh Stream to give indication of typical extent of RPA	Potentially affected
Sector 1	0189	*Alnus sp.*	Alder	400	4.8	Sample tree along Shanganagh Stream to give indication of typical extent of RPA	Potentially affected
Sector 1	0190	*Quercus sp.*	Oak	530	6.4	Sample tree along Shanganagh Stream to give indication of typical extent of RPA	Potentially affected
Sector 1	0191	*Quercus sp.*	Oak	500	6	Sample tree along Shanganagh Stream to give indication of typical extent of RPA	Potentially affected
Sector 1	0192	*Alnus sp.*	Alder	400	4.8	Sample tree along Shanganagh Stream to give indication of typical extent of RPA	Not affected
Sector 1	0193	*Alnus sp.*	Alder	240	2.9	Sample tree in public green space beside Bayview Glen to give indication of typical extent of RPA	Potentially affected
Sector 1	0194	*Alnus sp.*	Alder	350	4.2	Sample tree in public green space beside Bayview Glen to give indication of typical extent of RPA	Potentially affected
Sector 1	0195	*Alnus sp.*	Alder	780	9.4	Sample tree in public green space beside Bayview Glen to give indication of typical extent of RPA	Potentially affected
Sector 1	0022a	Acer sp.	Maple	250	3	Good	Not affected
Sector 1	0024a	*Acer pseudoplatanus*	Sycamore	440	5.3	Fair; discoloured leaves	Potentially affected
Sector 1	0025a	*Quercus sp.*	Oak	50	0.6	Fair; recently planted; has not established well; dead branches	Potentially affected
Sector 1	0026a	*Acer pseudoplatanus*	Sycamore	520	6.2	Fair; discoloured leaves	Potentially affected
Sector 1	0078a	*Fraxinus excelsior*	Ash	400	5	Fair; ash dieback	Not affected
Sector 2	0094	*Salix sp.*	Weeping willow	600	7.2	Good	Not affected
Sector 2	0095	*Prunus sp.*	Cherry	250	3	Good	Not affected
Sector 2	0096	*Prunus sp.*	Cherry	200	2.4	Fair; Previously topped; many weak attachements	Not affected
Sector 2	0097	*Sorbus intermedia*	Swedish Whitebeam	330	4	Fair; Large would where branch broken off; further dying branches over road	Not affected
Sector 2	0098	*Populus sp.*	Poplar	200	2.4	Fair; Variable foliage	Not affected
Sector 2	0099	Acer sp.	Maple	330	4	Fair; sparse crown	Not affected
Sector 2	0100	*Sorbus intermedia*	Swedish Whitebeam	380	4.6	Good	Not affected
Sector 2	0101	Acer sp.	Maple	240	2.9	Good	Not affected
Sector 2	0102	*Sorbus intermedia*	Swedish Whitebeam	480	5.8	Fair; some damaged branches over road; should be checked.	Not affected
Sector 2	0103	*Betula pendula*	Silver birch	390	4.7	Fair; Previously topped; many weak attachements	Not affected

Sector 2	0104	*Prunus sp.*	Cherry	500	6	Fair; sparse crown	Not affected
Sector 2	0105	*Chamaecyparis sp.*	Cypress	800	9.6	Good	Not affected
Sector 2	0106	*Tilia sp.*	Lime	470	5.6	Fair; leaning over yard; DLR Depot	Potentially affected
Sector 2	0107	*Pinus radiata*	Monterey pine	610	7.3	Good; DLR Depot	Potentially affected
Sector 2	0108	*Pinus radiata*	Monterey pine	570	6.8	Fair; discoloured needles; material stored against base should be removed; DLR Depot	Not affected
Sector 2	0109	*Pinus radiata*	Monterey pine	500	6	Fair; sparse crown; DLR Depot	Not affected
Sector 2	0110	*Pinus radiata*	Monterey pine	570	6.8	Good; DLR Depot	Not affected
Sector 2	0111	*Populus sp.*	Poplar	450	5.4	Good; DLR Depot	Not affected
Sector 2	0112	*Acer sp.*	Maple	410	4.9	Good; DLR Depot	Not affected
Sector 2	0113	*Alnus sp.*	Alder	230	2.8	Fair; sparse crown; DLR Depot	Not affected
Sector 2	0114	*Quercus sp.*	Oak	230	2.8	Fair; discoloured leaves; DLR Depot	Not affected
Sector 2	0115	*Prunus sp.*	Cherry	370	4.4	Fair; sparse crown; DLR Depot	Not affected
Sector 2	0116	Gleditsia triacanthos	Honey Locust	120	1.4	Good; DLR Depot	Not affected
Sector 2	0117	*Acer pseudoplatanus*	Sycamore	1030	12.4	Good; see BS5837 survey; Eurofound site	Potentially affected
Sector 2	0118	*Quercus sp.*	Oak	320	3.8	Fair; see BS5837 survey; Eurofound site	Potentially affected
Sector 2	0119	*Quercus sp.*	Oak	320	3.8	Fair; see BS5837 survey; Eurofound site	Potentially affected
Sector 2	0120	*Quercus sp.*	Oak	1320	15	Good; see BS5837 survey; Eurofound site	Potentially affected
Sector 2	0121	*Tilia sp.*	Lime	1320	15	Fair; see BS5837 survey; Eurofound site	Potentially affected
Sector 2	0122	*Quercus sp.*	Oak	110	1.3	Fair; see BS5837 survey; Eurofound site	Potentially affected
Sector 2	0123	*Betula pendula*	Silver birch	270	3.2	Good; see BS5837 survey; Eurofound site	Not affected
Sector 2	0124	*Betula pendula*	Silver birch	230	2.8	Fair; see BS5837 survey; Eurofound site	Potentially affected
Sector 2	0125	*Carpinus betulus*	Hornbeam	450	5.4	Good; Eurofound site	Not affected
Sector 2	0126	*Salix sp.*	Willow	530	6.4	Fair; Several wounds with rot; wilted foliage; Eurofound site	Potentially affected
Sector 2	0127	*Betula pendula*	Silver birch	140	1.7	Good; Eurofound site	Potentially affected
Sector 2	0128	*Tilia sp.*	Lime	470	5.6	Good; see BS5837 survey; Eurofound site	Potentially affected
Sector 2	0129	*Tilia sp.*	Lime	1000	12	Fair; see BS5837 survey; Eurofound site	Potentially affected
Sector 2	0130	*Acer pseudoplatanus*	Sycamore	200	2.4	Fair; top appears to have broken out; bushy appearance	Not affected
Sector 2	0131	*Acer sp.*	Maple	440	5.3	Good	Potentially affected
Sector 2	0132	*Pyrus sp.*	Pear	320	3.8	Fair; discoloured leaves	Potentially affected
Sector 2	0133	*Olearia sp.*	Olearia	330	4	Fair; large wound with rot	Potentially affected
Sector 2	0134	*Alnus sp.*	Alder	310	3.7	Fair; suppressed by neighbouring sycamore	Potentially affected
Sector 2	0135	*Acer pseudoplatanus*	Sycamore	420	5	Good	Potentially affected
Sector 2	0136	*Cotoneaster sp.*	Cotoneaster	360	4.3	Fair; some wounds with rot	Potentially affected
Sector 2	0137	*Platanus sp*	Plane	360	4.3	Good	Not affected
Sector 2	0138	*Platanus sp*	Plane	290	3.5	Good	Not affected
Sector 2	0139	*Populus sp.*	Poplar	530	6.4	Good	Not affected
Sector 2	0140	*Populus sp.*	Poplar	560	6.7	Good	Potentially affected
Sector 2	0141	*Acer sp.*	Maple	370	4.4	Fair; triple fork at 2.5m; wound with rot over road	Potentially affected
Sector 2	0142	*Quercus sp.*	Oak	240	2.9	Fair; discoloured leaves	Not affected
Sector 2	0143	*Aesculus hippocastanum*	Horse chestnut	320	3.8	Fair; leaf miner	Not affected
Sector 2	0144	*Quercus sp.*	Oak	450	5.4	Fair; crown top heavy	Not affected
Sector 2	0145	*Ulmus sp.*	Elm	330	4	Fair; poor crown shape due to pruning along road	Potentially affected
Sector 2	0146	*Ulmus sp.*	Elm	440	5.3	Fair; poor crown shape due to pruning along road	Potentially affected
Sector 2	0147	*Ulmus sp.*	Elm	420	5	Fair; poor crown shape due to pruning along road	Potentially affected
Sector 2	0148	*Ulmus sp.*	Elm	350	4.2	Fair; poor crown shape due to pruning along road	Potentially affected
Sector 2	0149	*Ulmus sp.*	Elm	390	4.7	Fair; poor crown shape due to pruning along road	Potentially affected
Sector 2	0150	*Ulmus sp.*	Elm	370	4.4	Fair; poor crown shape due to pruning along road	Potentially affected
Sector 2	0151	*Ulmus sp.*	Elm	370	4.4	Fair; poor crown shape due to pruning along road	Potentially affected
Sector 2	0152	*Ulmus sp.*	Elm	370	4.4	Fair; poor crown shape due to pruning along road	Potentially affected
Sector 2	0153	*Ulmus sp.*	Elm	400	4.8	Fair; poor crown shape due to pruning along road	Potentially affected
Sector 2	0154	*Ulmus sp.*	Elm	340	4.1	Fair; poor crown shape due to pruning along road	Potentially affected
Sector 2	0155	*Ulmus sp.*	Elm	350	4.2	Fair; poor crown shape due to pruning along road	Potentially affected
Sector 2	0156	*Ulmus sp.*	Elm	320	3.8	Fair; poor crown shape due to pruning along road	Potentially affected
Sector 2	0157	*Ulmus sp.*	Elm	260	3.1	Fair; poor crown shape due to pruning along road	Potentially affected
Sector 2	0158	*Platanus sp*	Plane	330	4	Fair; poor crown shape due to pruning along road	Potentially affected
Sector 2	0159	*Ulmus sp.*	Elm	300	3.6	Fair; poor crown shape due to pruning along road	Potentially affected
Sector 2	0160	*Sorbus aucuparia*	Rowan	230	2.8	Fair; small leaves	Not affected
Sector 2	0161	*Tilia sp.*	Lime	310	3.7	Good	Not affected
Sector 2	0162	*Betula sp.*	Birch	240	2.9	Good	Not affected
Sector 2	0163	*Betula pendula*	Silver birch	480	5.8	Good	Potentially affected
Sector 2	0164	*Betula pendula*	Silver birch	300	3.6	Fair; suppressed by neighbouring tree	Not affected
Sector 2	0165	*Acer pseudoplatanus*	Sycamore	350	4.2	Good	Potentially affected

Sector 2	0166	*Carpinus betulus*	Hornbeam	110	1.3	Good	Not affected
Sector 2	0167	*Carpinus betulus*	Hornbeam	110	1.3	Good	Not affected
Sector 2	0168	*Carpinus betulus*	Hornbeam	120	1.4	Good	Not affected
Sector 2	0169	*Tilia sp.*	Lime	160	1.9	Fair; suppressed by neighbouring tree	Not affected
Sector 2	0170	Fagus sylvatica f. purpurea	Copper Beech	1000	12	Good; on private ground	Not affected
Sector 2	0171	*Quercus sp.*	Oak	280	3.4	Fair; discoloured leaves; three similar trees nearby	Not affected
Sector 2	0172	*Alnus sp.*	Alder	210	2.5	Fair; crown one sided; two similar alders close by	Not affected
Sector 2	0173	*Quercus sp.*	Oak	300	3.6	Fair; mildew on leaves	Not affected
Sector 2	0174	*Ulmus sp.*	Elm	330	4	Fair; slight lean over road	Potentially affected
Sector 2	0175	*Ulmus sp.*	Elm	320	3.8	Fair; slight lean over road	Potentially affected
Sector 2	0176	*Tilia sp.*	Lime	900	10.8	Good; Eurofound site	Not affected
Sector 2	0177	*Ulmus sp.*	Elm	400	4.8	Fair; poor crown shape due to pruning along road	Potentially affected
Sector 2	0178	*Ulmus sp.*	Elm	320	3.8	Fair; poor crown shape due to pruning along road	Potentially affected
Sector 2	0179	*Ulmus sp.*	Elm	470	5.6	Fair; poor crown shape due to pruning along road	Potentially affected
Sector 2	0200	*Metasequoia glyptostroboides*	Dawn redwood	260	3.1	Good; see BS5837 survey; Eurofound site	Requires Removal
Sector 2	0201	*Tilia sp.*	Lime	450	5.4	Good; see BS5837 survey; Eurofound site	Potentially affected
Sector 2	0202	*Salix sp.*	Willow	1030	12.4	Good; see BS5837 survey; Eurofound site	Potentially affected
Sector 2	0203	*Acer sp.*	Maple	230	2.8	Good; Eurofound site	Not affected
Sector 2	0204	*Fagus sylvatica*	Beech	670	8	Good; Eurofound site	Not affected
Sector 2	0206	*Prunus sp.*	Cherry	530	6.4	Good; Eurofound site	Not affected
Sector 2	0207	*Betula sp.*	Birch	230	2.8	Good; Eurofound site	Not affected
Sector 2	0208	*Pyrus sp.*	Pear	80	1	Fair; dicoloured leaves; Eurofound site	Potentially affected
Sector 2	0209	*Metasequoia glyptostroboides*	Dawn redwood	540	6.5	Good; see BS5837 survey; Eurofound site	Potentially affected
Sector 2	0210	Cedrus libani	Cedar of Lebanon	1020	12.2	Good; see BS5837 survey; Eurofound site	Potentially affected
Sector 2	0211	*Aesculus hippocastanum*	Horse chestnut	890	10.7	Fair; see BS5837 survey; Eurofound site	Not affected
Sector 2	0213	*Fagus sylvatica*	Beech	910	10.9	Good; Eurofound site	Not affected
Sector 2	0214	*Fagus sylvatica*	Beech	880	10.6	Good; Eurofound site	Not affected
Sector 2	0215	*Acer pseudoplatanus*	Sycamore	940	11.3	Good; Eurofound site	Not affected
Sector 2	0216	*Fagus sylvatica*	Beech	900	10.8	Good; Eurofound site	Not affected
Sector 2	0217	*Tilia sp.*	Lime	310	3.7	Good; base right beside kerb	Not affected
Sector 2	0218	*Acer pseudoplatanus*	Sycamore	180	2.2	Good; base right beside kerb	Not affected
Sector 2	0219	*Picea sp.*	Spruce	200	2.4	Good; on private ground	Not affected
Sector 2	0220	*Griselinia sp.*	Griselinia	350	4.2	Good; on private ground	Not affected
Sector 2	0221	*Betula pendula*	Silver birch	200	2.4	Good; on private ground	Not affected
Sector 2	0287	*Acer sp.*	Maple	160	1.9	Fair; small/discoloured leaves; Loughlinstown Park	Not affected
Sector 2	0288	*Acer sp.*	Maple	200	2.4	Fair; small/discoloured leaves; Loughlinstown Park	Requires Removal
Sector 2	0289	*Acer sp.*	Maple	170	2	Fair; small/discoloured leaves; Loughlinstown Park	Requires Removal
Sector 2	0290	*Acer sp.*	Maple	170	2	Fair; small/discoloured leaves; Loughlinstown Park	Potentially affected
Sector 2	0291	*Acer sp.*	Maple	170	2	Fair; small/discoloured leaves; Loughlinstown Park	Potentially affected
Sector 2	0292	*Acer sp.*	Maple	170	2	Fair; small/discoloured leaves; Loughlinstown Park	Potentially affected
Sector 2	0293	*Acer sp.*	Maple	170	2	Fair; small/discoloured leaves; Loughlinstown Park	Potentially affected
Sector 2	0294	*Tilia sp.*	Lime	1200	14.4	Fair; some deadwood; base previously set on fire; Loughlinstown Park	Potentially affected
Sector 2	0295	*Fraxinus excelsior*	Ash	1070	12.8	Good in 2019; but now likely to suffer from ash dieback; Loughlinstown Park	Potentially affected
Sector 2	0296	*Fraxinus excelsior*	Ash	1220	14.6	Fair in 2019; presence of fungal braket at base; now likely to suffer from ash dieback; Loughlinstown Park	Potentially affected
Sector 2	0297	*Fraxinus excelsior*	Ash	910	10.9	Fair in 2019; presence of fungal braket at base; now likely to suffer from ash dieback; Loughlinstown Park	Not affected
Sector 2	0298	*Quercus sp.*	Oak	1110	13.3	Poor in 2019: in decline; many wounds with rot; Loughlinstown Park	Not affected
Sector 2	0299	*Acer sp.*	Maple	170	2	Fair; small/discoloured leaves; Loughlinstown Park	Potentially affected
Sector 2	0300	*Acer sp.*	Maple	170	2	Fair; small/discoloured leaves; Loughlinstown Park	Requires Removal
Sector 2	0301	*Acer sp.*	Maple	170	2	Fair; small/discoloured leaves; Loughlinstown Park	Potentially affected
Sector 2	0302	*Acer sp.*	Maple	170	2	Fair; small/discoloured leaves; Loughlinstown Park	Requires Removal
Sector 2	0303	*Acer sp.*	Maple	170	2	Fair; small/discoloured leaves; Loughlinstown Park	Requires Removal
Sector 2	0304	*Acer sp.*	Maple	170	2	Fair; small/discoloured leaves; Loughlinstown Park	Not affected
Sector 2	0305	*Acer sp.*	Maple	170	2	Fair; small/discoloured leaves; Loughlinstown Park	Not affected
Sector 2	0306	*Acer sp.*	Maple	170	2	Fair; small/discoloured leaves; Loughlinstown Park	Not affected
Sector 2	0204a	*Betula sp.*	Birch	140	1.7	Good; Eurofound site	Not affected
Sector 2	0211a	*Acer pseudoplatanus*	Sycamore	980	11.8	Good; Eurofound site	Not affected
Sector 3	0222	*Acer sp.*	Maple	70	0.8	Fair; discoloured leaves	Not affected
Sector 3	0223	*Acer sp.*	Maple	70	0.8	Good	Not affected
Sector 3	0224	*Acer sp.*	Maple	80	1	Good	Not affected
Sector 3	0225	*Acer sp.*	Maple	70	0.8	Good	Not affected
Sector 3	0226	*Acer sp.*	Maple	70	0.8	Good	Not affected
Sector 3	0227	*Acer sp.*	Maple	70	0.8	Good	Not affected

Sector 3	0228	*Acer sp.*	Maple	70	0.8	Good	Not affected
Sector 3	0229	*Acer sp.*	Maple	70	0.8	Good	Not affected
Sector 3	0230	*Acer sp.*	Maple	80	1	Good	Not affected
Sector 3	0231	*Acer sp.*	Maple	70	0.8	Good	Not affected
Sector 3	0232	*Acer sp.*	Maple	70	0.8	Good	Not affected
Sector 3	0233	*Acer sp.*	Maple	70	0.8	Good	Not affected
Sector 3	0234	*Acer sp.*	Maple	220	2.6	Good	Not affected
Sector 3	0235	*Acer sp.*	Maple	180	2.2	Good	Not affected
Sector 3	0236	*Acer sp.*	Maple	200	2.4	Fair; discoloured leaves	Not affected
Sector 3	0237	*Acer sp.*	Maple	200	2.4	Good	Not affected
Sector 3	0238	*Acer sp.*	Maple	200	2.4	Good	Not affected
Sector 3	0239	*Acer sp.*	Maple	260	3.1	Good	Not affected
Sector 3	0240	*Acer sp.*	Maple	250	3	Good	Not affected
Sector 3	0241	*Acer sp.*	Maple	200	2.4	Good	Not affected
Sector 3	0242	*Acer sp.*	Maple	170	2	Good	Not affected
Sector 3	0243	*Acer sp.*	Maple	220	2.6	Good	Not affected
Sector 3	0244	*Prunus sp.*	Cherry	100	1.2	Good	Potentially affected
Sector 3	0245	*Salix sp.*	Willow	300	3.6	Fair; discoloured leaves	Potentially affected
Sector 3	0246	*Salix sp.*	Willow	300	3.6	Fair; discoloured leaves	Requires Removal
Sector 3	0247	*Sorbus intermedia*	Swedish Whitebeam	100	1.2	Good; young tree	Requires Removal
Sector 3	0248	*Fraxinus excelsior*	Ash	100	1.2	Poor; severe ash dieback	Requires Removal
Sector 3	0249	*Quercus sp.*	Oak	100	1.2	Fair; poor crown structure; young tree	Potentially affected
Sector 3	0250	*Salix sp.*	Willow	170	2	Fair; regrowth from fallen tree; some dead branches	Potentially affected
Sector 3	0251	*Salix sp.*	Willow	600	7.2	Fair; sparse crown	Potentially affected
Sector 4	0252	*Acer pseudoplatanus*	Sycamore	390	4.7	Good; bushy; one similar tree nearby	Not affected
Sector 5	0253	*Thuja sp.*	Thuja	400	4.8	Poor; little foliage; previously surrounded by other trees	Not affected
Sector 5	0254	*Fraxinus excelsior*	Ash	300	3.6	Poor; severe ash dieback	Not affected
Sector 5	0255	*Thuja sp.*	Thuja	260	3.1	Fair; sparse crown; smaller Thuja and birch nearby	Not affected
Sector 5	0256	*Fraxinus excelsior*	Ash	600	7.2	Fair; ash dieback	Potentially affected
Sector 5	0257	*Ulmus sp.*	Elm	400	4.8	Fair; suppressed by neighbouring tree	Potentially affected
Sector 5	0258	*Fraxinus excelsior*	Ash	500	6	Fair; ash dieback	Potentially affected
Sector 5	0259	*Fraxinus excelsior*	Ash	150	1.8	Poor; severe ash dieback	Potentially affected
Sector 5	0260	*Fraxinus excelsior*	Ash	300	3.6	Fair; ash dieback	Potentially affected
Sector 5	0261	*Fraxinus excelsior*	Ash	350	4.2	Fair; ash dieback	Potentially affected
Sector 5	0262	*Fraxinus excelsior*	Ash	300	3.6	Poor; severe ash dieback	Potentially affected
Sector 5	0263	*Fraxinus excelsior*	Ash	390	4.7	Poor; severe ash dieback	Potentially affected
Sector 5	0264	*Alnus sp.*	Alder	150	1.8	Fair; sparse crown; largest tree at eastern end of tree group to indicate maximum RPA	Not affected
Sector 5	0265	*Fraxinus excelsior*	Ash	350	4.2	Fair; ash dieback	Potentially affected
Sector 5	0266	*Fraxinus excelsior*	Ash	250	3	Fair; ash dieback	Potentially affected
Sector 5	0267	*Tilia sp.*	Lime	400	4.8	Good	Potentially affected
Sector 5	0268	*Quercus sp.*	Oak	100	1.2	Fair; discoloured leaves; other trees with smaller stems nearby; all in raised planting area	Not affected
Sector 5	0269	*Fraxinus excelsior*	Ash	550	6.6	Fair; ash dieback	Potentially affected
Sector 5	0270	*Eucalyptus sp.*	Eucalyptus	730	8.8	Good; multi-stem with one large stem towards road	Potentially affected
Sector 5	0271	*Acer sp.*	Maple	620	7.4	Good	Potentially affected
Sector 5	0272	Chamaecyparis sp.	Cypress	260	3.1	Fair; sparse crown; two other Cypress nearby, one dead	Potentially affected
Sector 5	0273	*Fagus sylvatica*	Beech	700	8.4	Good; on private ground	Potentially affected
Sector 5	0274	*Acer sp.*	Maple	500	6	Fair; poorly shaped crown as pruned around electricity cable; on private ground	Potentially affected
Sector 5	0275	*Fagus sylvatica*	Beech	700	8.4	Good; on private ground	Potentially affected
Sector 5	0276	*Carpinus betulus 'Fastigiata'*	Hornbeam	290	3.5	Good	Not affected
Sector 5	0277	*Carpinus betulus 'Fastigiata'*	Hornbeam	240	2.9	Good	Not affected
Sector 5	0278	*Carpinus betulus 'Fastigiata'*	Hornbeam	280	3.4	Good	Not affected
Sector 5	0282	*Fraxinus excelsior*	Ash	600	7.2	Fair; ash dieback; separated from road by ditch, as are other trees nearby; on private ground	Potentially affected
Sector 5	0283	*Betula sp.*	Birch	400	4.8	Good; on private ground	Not affected
Sector 5	0284	*Fraxinus excelsior*	Ash	600	7.2	Fair; ash dieback; poorly shaped crown as pruned around electricity cable; on private ground	Potentially affected
Sector 5	0285	*Fraxinus excelsior*	Ash	500	6	Fair; ash dieback; poorly shaped crown as pruned around electricity cable	Potentially affected
Sector 5	0286	*Chamaecyparis sp.*	Cypress	1000	12	Fair; second tree nearby; eastern half of crowns bare, where neighbouring trees recently removed	Potentially affected
Sector 6	0279	*Carpinus betulus 'Fastigiata'*	Hornbeam	260	3.1	Good	Not affected
Sector 6	0280	*Fraxinus excelsior*	Ash	300	3.6	Fair; ash dieback	Requires Removal
Sector 6	0281	*Fraxinus excelsior*	Ash	200	2.4	Fair; ash dieback	Not affected

Appendix B Tree Survey Results Mapping

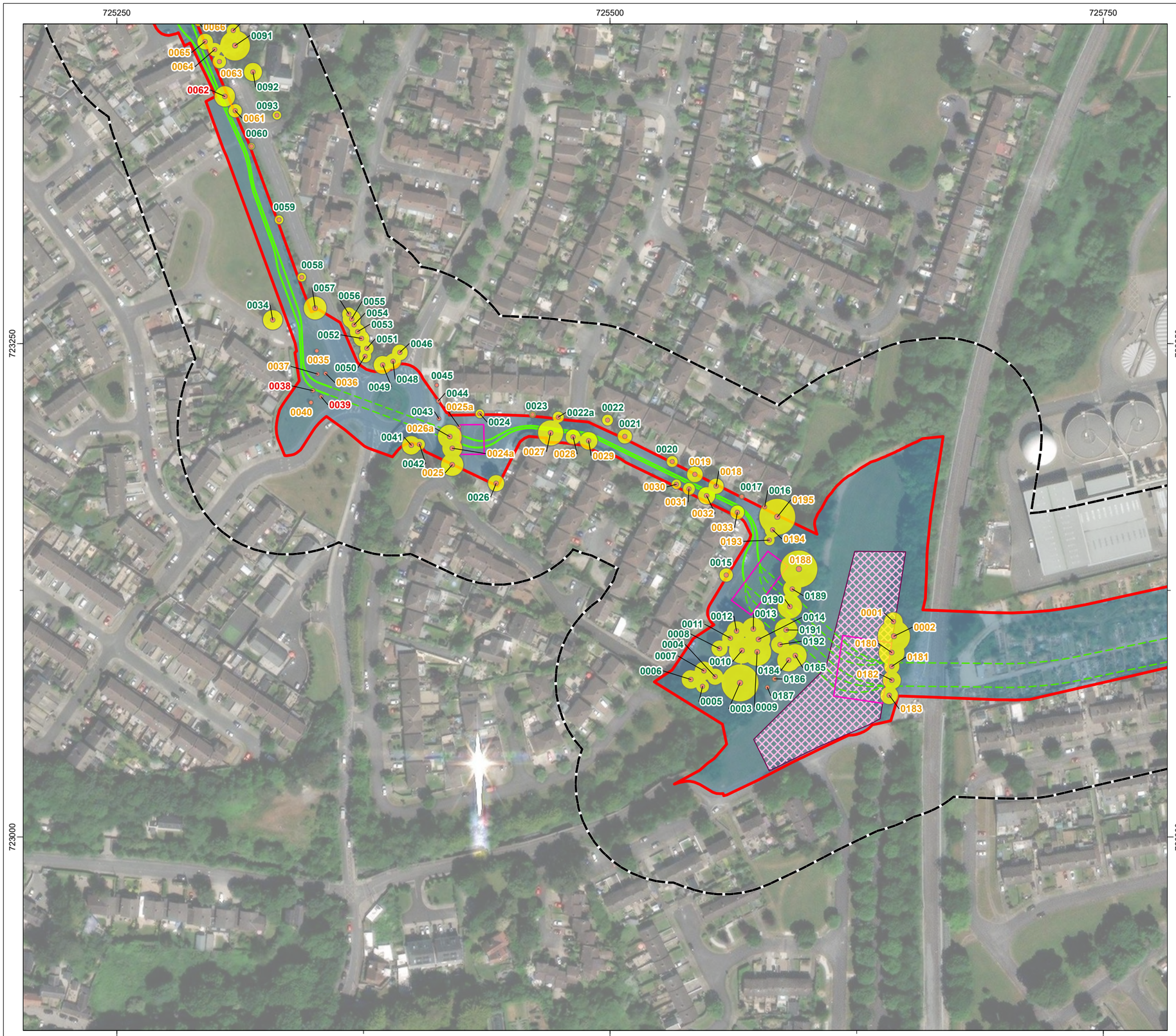
Dublin Array Offshore Wind Farm

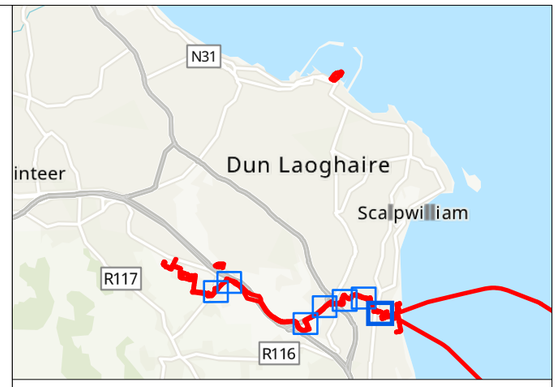
Volume 6, Technical Appendix 6.5.7-2: Tree Survey Report

Kish Offshore Wind Limited

SLR Project No.: 501.065303.00001

January 2025





Application Site Boundary

Onshore Electrical System (OES) 50 m Study Area

Onshore Electrical System (OES) Design

Temporary Trenchless Crossing Compound

Onshore Export Cable Route (Trenchless)

Onshore Export Cable Route (Trenched)

Temporary Construction Compound (TCC)

Export Cable Route (ECR) Sector

Sector 1

Tree Survey Results

Tree Protection Zones – No dig area, 1 m from tree trunk (as per NJUG Volume 4, 2007)

Root Protection Area (RPA; as per BS5837:2012) / Precautionary Zone (as per NJUG Volume 4, 2007)

Impact of ECR on Trees (Label colour denotes impact level)

0001 Trees Not Affected by ECR

0001 Trees Potentially Affected By ECR

0001 Trees To Be Removed To Facilitate The ECR

DRAWING STATUS

PUBLIC

MAP NOTES / DATA SOURCES:
Maxar, Microsoft, Esri UK, Esri, TomTom, Garmin, Foursquare, METI/NASA, USGS ©Ordnance Survey Ireland 2023 © Tailte Eireann. (CYSL50270365) Not to be used for Navigation.

PROJECT TITLE

Dublin Array

DRAWING TITLE

Arboriculture:
Trees Survey Results Mapping

DRAWING NUMBER: **Figure: 1**

PAGE NUMBER: **1 of 7**

VER	DATE	REMARKS	DRAW	CHEK	APRD
01	2025-02-04	DRAFT	JK	SW	AE
02	2025-01-30	Public	JK	AM	AM

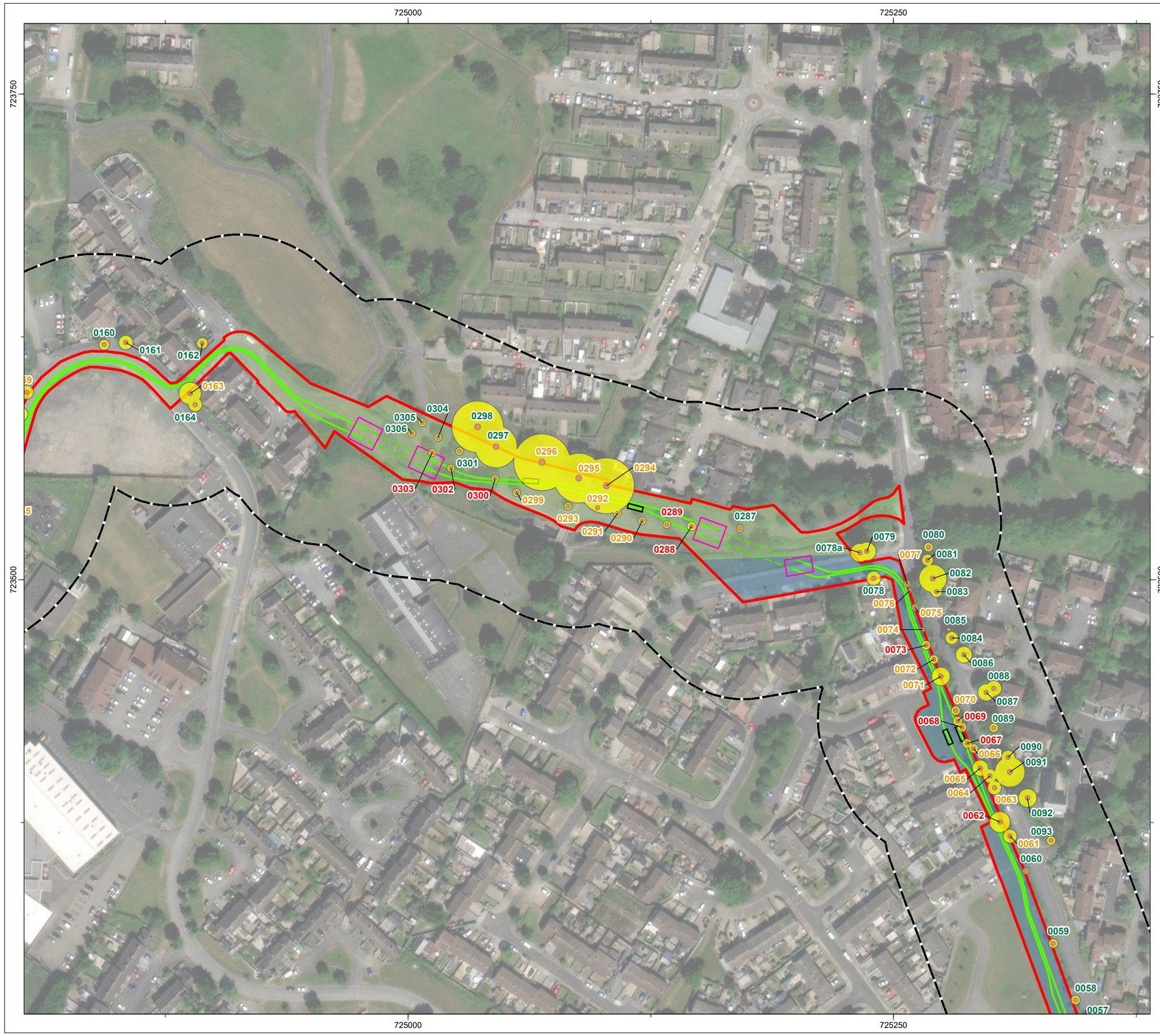
0 10 20 30 40 Meters
0 25 50 75 100 Feet

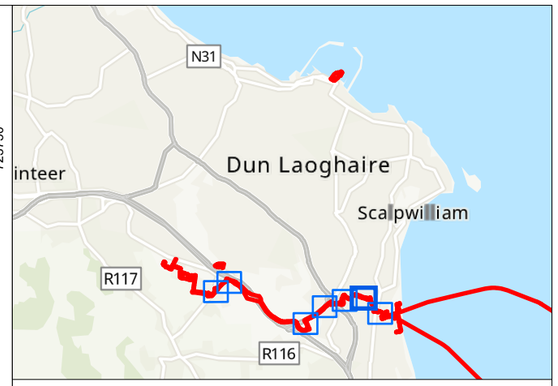
N
GRID NORTH

SCALE 1:2,000 PLOT SIZE A3
DATUM IRENET95 VERTICAL REF ODN/LAT/MLLW
PRJ IRENET95 Irish Transverse Mercator

SLR

Dublin Array
Generation for generations
Kish Offshore Wind Limited - Bray Offshore Wind Limited





Application Site Boundary

Onshore Electrical System (OES) 50 m Study Area

Onshore Electrical System (OES) Design

- Temporary Trenchless Crossing Compound
- Underground Joint Bay
- Onshore Export Cable Route (Trenchless)
- Onshore Export Cable Route (Trenched)

Export Cable Route (ECR) Sector

- Sector 1
- Sector 2

Tree Survey Results

- Tree Protection Zones – No dig area, 1 m from tree trunk (as per NJUG Volume 4, 2007)
- Root Protection Area (RPA; as per BS5837:2012) / Precautionary Zone (as per NJUG Volume 4, 2007)

Impact of ECR on Trees (Label colour denotes impact level)

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- 0001 Trees Potentially Affected By ECR
- 0001 Trees To Be Removed To Facilitate The ECR

DRAWING STATUS

PUBLIC

MAP NOTES / DATA SOURCES:
Maxar, Microsoft, Esri UK, Esri, TomTom, Garmin, Foursquare, METI/NASA, USGS ©Ordnance Survey Ireland 2023 © Tailte Eireann. (CYSL50270365) Not to be used for Navigation.

PROJECT TITLE

Dublin Array

DRAWING TITLE

Arboriculture: Trees Survey Results Mapping

DRAWING NUMBER: **Figure: 2**

PAGE NUMBER: **2 of 7**

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02	2025-01-30	Public	JK	AM	AM

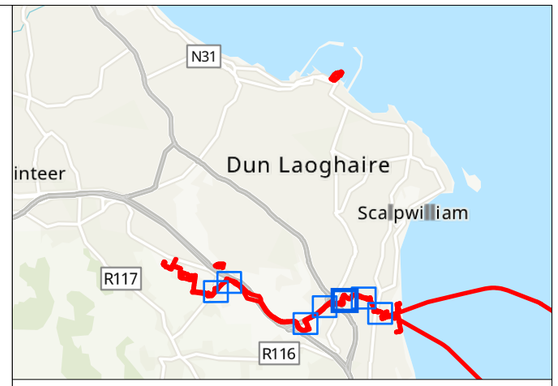
0 10 20 30 40 Meters
0 25 50 75 100 Feet

N GRID NORTH

SCALE 1:2,000 PLOT SIZE A3
DATUM IRENET95 VERTICAL REF CDN/LAT/MLLW
PRJ IRENET95 Irish Transverse Mercator

SLR

Dublin Array
Generation for generations
Kish Offshore Wind Limited - Bray Offshore Wind Limited



Application Site Boundary

Onshore Electrical System (OES) 50 m Study Area

Onshore Electrical System (OES) Design

- Temporary Trenchless Crossing Compound
- Underground Joint Bay
- Onshore Export Cable Route (Trenchless)
- Onshore Export Cable Route (Trenched)

Export Cable Route (ECR) Sector

- Sector 2
- Sector 3

Tree Survey Results

- Tree Protection Zones – No dig area, 1 m from tree trunk (as per NJUG Volume 4, 2007)
- Root Protection Area (RPA; as per BS5837:2012) / Precautionary Zone (as per NJUG Volume 4, 2007)

Impact of ECR on Trees (Label colour denotes impact level)

- 0001 Trees Not Affected by ECR
- 0001 Trees Potentially Affected By ECR
- 0001 Trees To Be Removed To Facilitate The ECR

DRAWING STATUS

PUBLIC

DISCLAIMER

MAP NOTES / DATA SOURCES:

PROJECT TITLE

Dublin Array

DRAWING TITLE

Arboriculture: Trees Survey Results Mapping

DRAWING NUMBER: **Figure: 3**

PAGE NUMBER: **3 of 7**

VER	DATE	REMARKS	DRAW	CHEK	APRD
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02	2025-01-30	Public	JK	AM	AM

0 10 20 30 40 Meters

0 25 50 75 100 Feet

N GRID NORTH

SCALE 1:2,000 PLOT SIZE A3

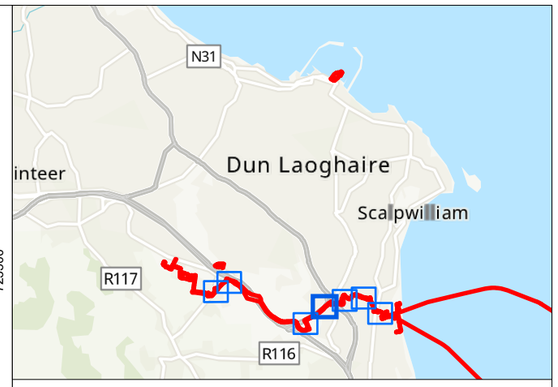
DATUM IRENET95 VERTICAL REF CDN/LAT/MLW

PRJ IRENET95 Irish Transverse Mercator

SLR

Dublin Array Generation for generations

Kish Offshore Wind Limited - Bray Offshore Wind Limited



Application Site Boundary

Onshore Electrical System (OES) 50 m Study Area

Onshore Electrical System (OES) Design

Temporary Trenchless Crossing Compound

Underground Joint Bay

Onshore Export Cable Route (Trenchless)

Onshore Export Cable Route (Trenched)

Export Cable Route (ECR) Sector

Sector 3

Tree Survey Results

Tree Protection Zones – No dig area, 1 m from tree trunk (as per NJUG Volume 4, 2007)

Root Protection Area (RPA; as per BS5837:2012) / Precautionary Zone (as per NJUG Volume 4, 2007)

Impact of ECR on Trees (Label colour denotes impact level)

0001 Trees Not Affected by ECR

0001 Trees Potentially Affected By ECR

0001 Trees To Be Removed To Facilitate The ECR

DRAWING STATUS

PUBLIC

MAP NOTES / DATA SOURCES:
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PROJECT TITLE

Dublin Array

DRAWING TITLE

Arboriculture:
Trees Survey Results Mapping

DRAWING NUMBER: **Figure: 4**

PAGE NUMBER: **4 of 7**

VER	DATE	REMARKS	DRAW	CHEK	APRD
01	2025-02-04	DRAFT	JK	SW	AE
02	2025-01-30	Public	JK	AM	AM

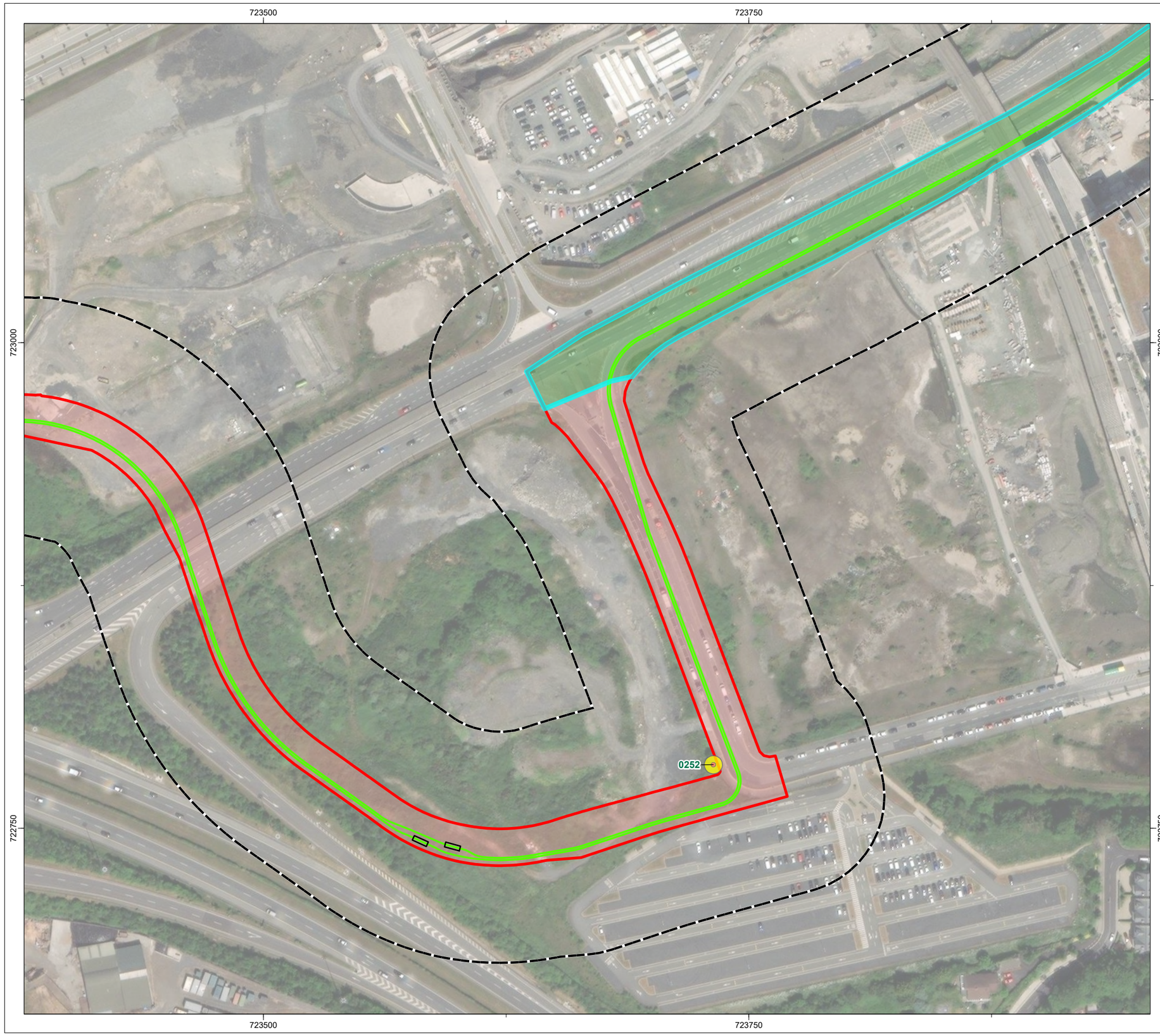
0 10 20 30 40 Meters
0 25 50 75 100 Feet

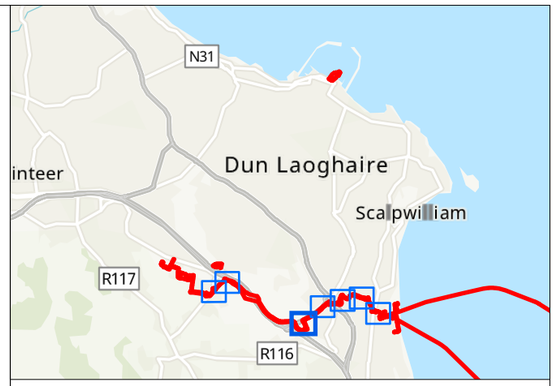
N
GRID NORTH

SCALE 1:2,000 PLOT SIZE A3
DATUM IRENET95 VERTICAL REF CDN/LAT/MLLW
PRJ IRENET95 Irish Transverse Mercator

SLR

Dublin Array
Generation for generations
Kish Offshore Wind Limited - Bray Offshore Wind Limited





Application Site Boundary

Onshore Electrical System (OES) 50 m Study Area

Onshore Electrical System (OES) Design

Underground Joint Bay

Onshore Export Cable Route (Trenched)

Export Cable Route (ECR) Sector

Sector 3

Sector 4

Tree Survey Results

Tree Protection Zones – No dig area, 1 m from tree trunk (as per NJUG Volume 4, 2007)

Root Protection Area (RPA; as per BS5837:2012) / Precautionary Zone (as per NJUG Volume 4, 2007)

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0001 Trees To Be Removed To Facilitate The ECR

DRAWING STATUS

PUBLIC

DISCLAIMER

MAP NOTES / DATA SOURCES:

PROJECT TITLE

Dublin Array

DRAWING TITLE

Arboriculture:
Trees Survey Results Mapping

DRAWING NUMBER: **Figure: 5**

PAGE NUMBER: **5 of 7**

VER	DATE	REMARKS	DRAW	CHEK	APRD
01	2025-02-04	DRAFT	JK	SW	AE
02	2025-01-30	Public	JK	AM	AM

0 10 20 30 40 Meters

0 25 50 75 100 Feet

N GRID NORTH

SCALE 1:2,000 PLOT SIZE A3

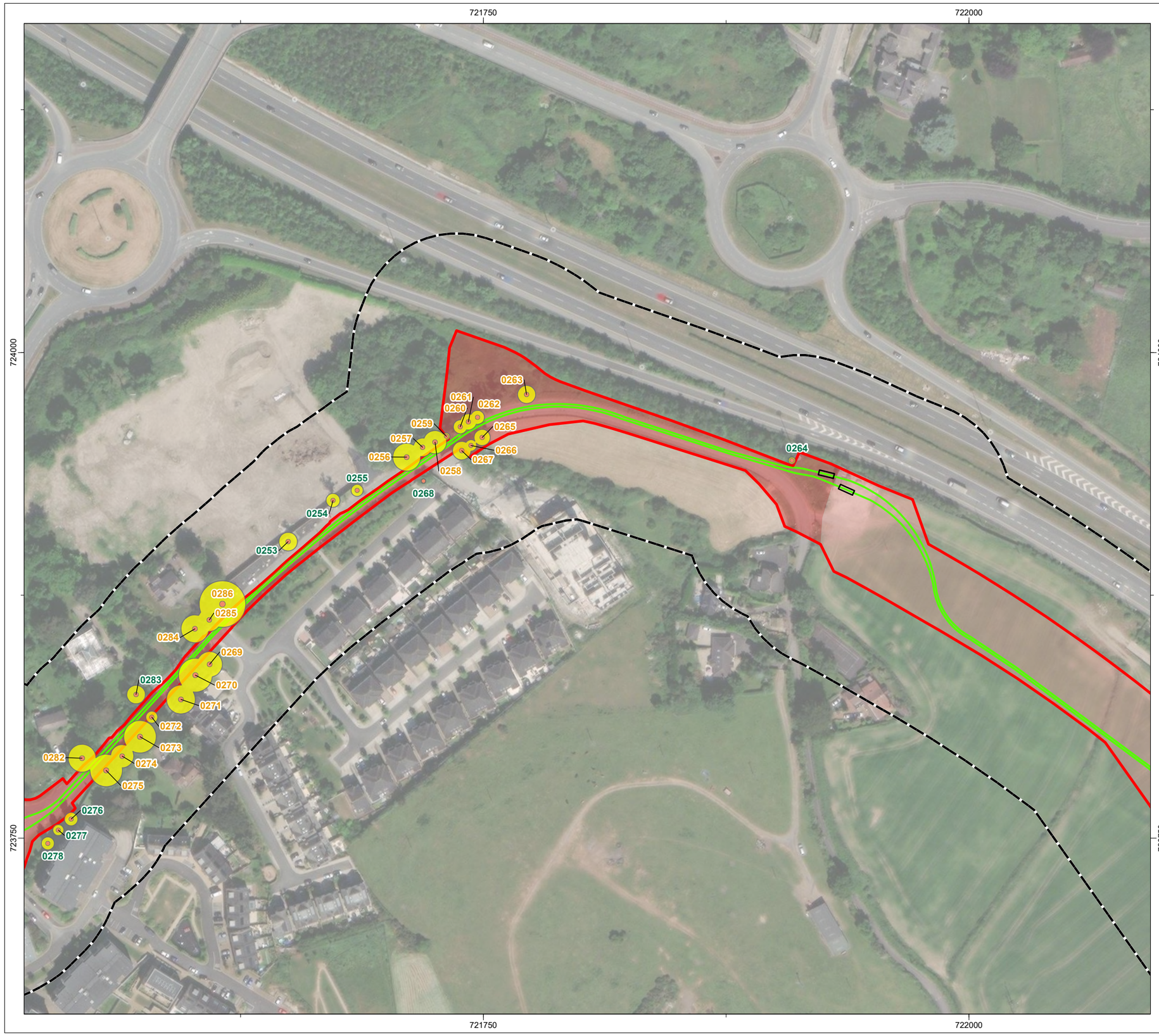
DATUM IRENET95 VERTICAL REF CDN/LAT/MLLW

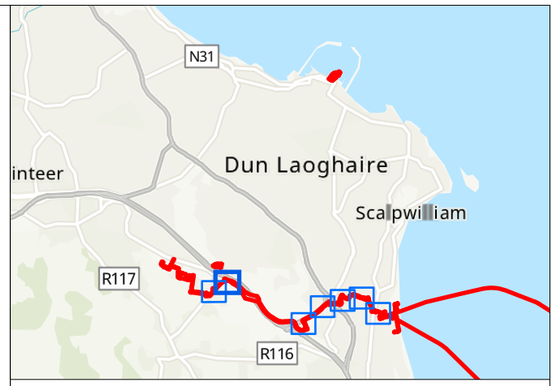
PRJ IRENET95 Irish Transverse Mercator

SLR

Dublin Array Generation for generations

Kish Offshore Wind Limited - Bray Offshore Wind Limited





Application Site Boundary

Onshore Electrical System (OES) 50 m Study Area

Onshore Electrical System (OES) Design

Underground Joint Bay

Onshore Export Cable Route (Trenched)

Export Cable Route (ECR) Sector

Sector 4

Sector 5

Tree Survey Results

Tree Protection Zones – No dig area, 1 m from tree trunk (as per NJUG Volume 4, 2007)

Root Protection Area (RPA; as per BS5837:2012) / Precautionary Zone (as per NJUG Volume 4, 2007)

Impact of ECR on Trees (Label colour denotes impact level)

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0001 Trees Potentially Affected By ECR

0001 Trees To Be Removed To Facilitate The ECR

DRAWING STATUS

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PROJECT TITLE

Dublin Array

DRAWING TITLE

Arboriculture:
Trees Survey Results Mapping

DRAWING NUMBER: **Figure: 6**

PAGE NUMBER: **6 of 7**

VER	DATE	REMARKS	DRAW	CHEK	APRD
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02	2025-01-30	Public	JK	AM	AM

0 10 20 30 40 Meters

0 25 50 75 100 Feet

N GRID NORTH

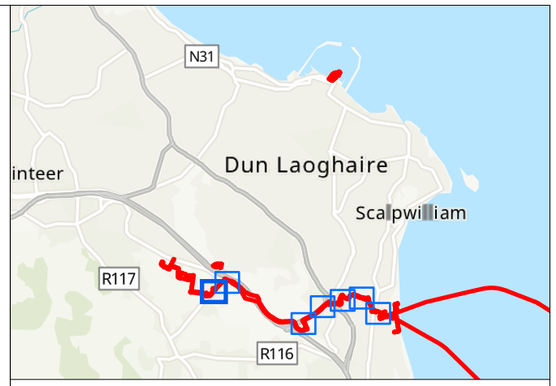
SCALE 1:2,000 PLOT SIZE A3

DATUM IRENET95 VERTICAL REF ODN/LAT/MLLW

PRJ IRENET95 Irish Transverse Mercator

SLR

Dublin Array
Generation for generations
Kish Offshore Wind Limited - Bray Offshore Wind Limited



Application Site Boundary

Onshore Electrical System (OES) 50 m Study Area

Onshore Electrical System (OES) Design

- Temporary Trenchless Crossing Compound
- Underground Joint Bay
- Onshore Export Cable Route (Trenchless)
- Onshore Export Cable Route (Trenched)

Export Cable Route (ECR) Sector

- Sector 5
- Sector 6
- Sector 7

Tree Survey Results

- Tree Protection Zones – No dig area, 1 m from tree trunk (as per NJUG Volume 4, 2007)
- Root Protection Area (RPA; as per BS5837:2012) / Precautionary Zone (as per NJUG Volume 4, 2007)

Impact of ECR on Trees (Label colour denotes impact level)

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- 0001 Trees Potentially Affected By ECR
- 0001 Trees To Be Removed To Facilitate The ECR

DRAWING STATUS

PUBLIC

MAP NOTES / DATA SOURCES:
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PROJECT TITLE

Dublin Array

DRAWING TITLE

Arboriculture:
Trees Survey Results Mapping

DRAWING NUMBER: **Figure: 7**

PAGE NUMBER: **7 of 7**

VER	DATE	REMARKS	DRAW	CHEK	APRD
01	2025-02-04	DRAFT	JK	SW	AE
02	2025-01-30	Public	JK	AM	AM

0 10 20 30 40 Meters
0 25 50 75 100 Feet

N GRID NORTH

SCALE 1:2,000 PLOT SIZE A3
DATUM IRENET95 VERTICAL REF ODN/LAT/MLLW
PRJ IRENET95 Irish Transverse Mercator

SLR

Dublin Array
Generation for generations
Kish Offshore Wind Limited - Bray Offshore Wind Limited

Appendix C Tree Protection Fencing Illustrations

Dublin Array Offshore Wind Farm

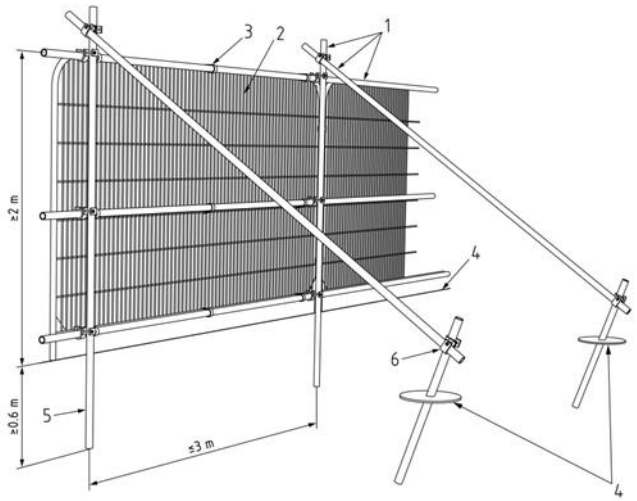
Volume 6, Technical Appendix 6.5.7-2: Tree Survey Report

Kish Offshore Wind Limited

SLR Project No.: 501.065303.00001

January 2025

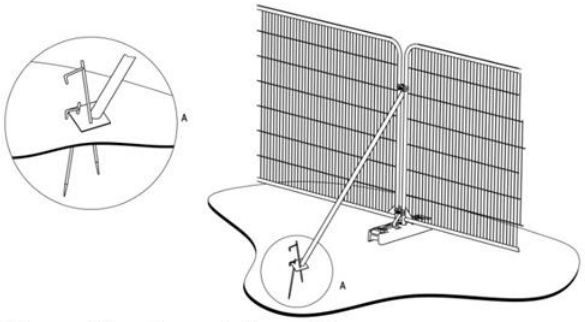
Extracts taken from B.S. 5837: (2012), “Trees in relation to design, demolition and construction – Recommendation”.



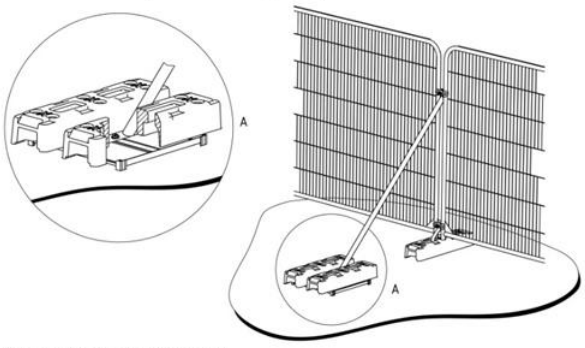
Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Default specification for protective barrier

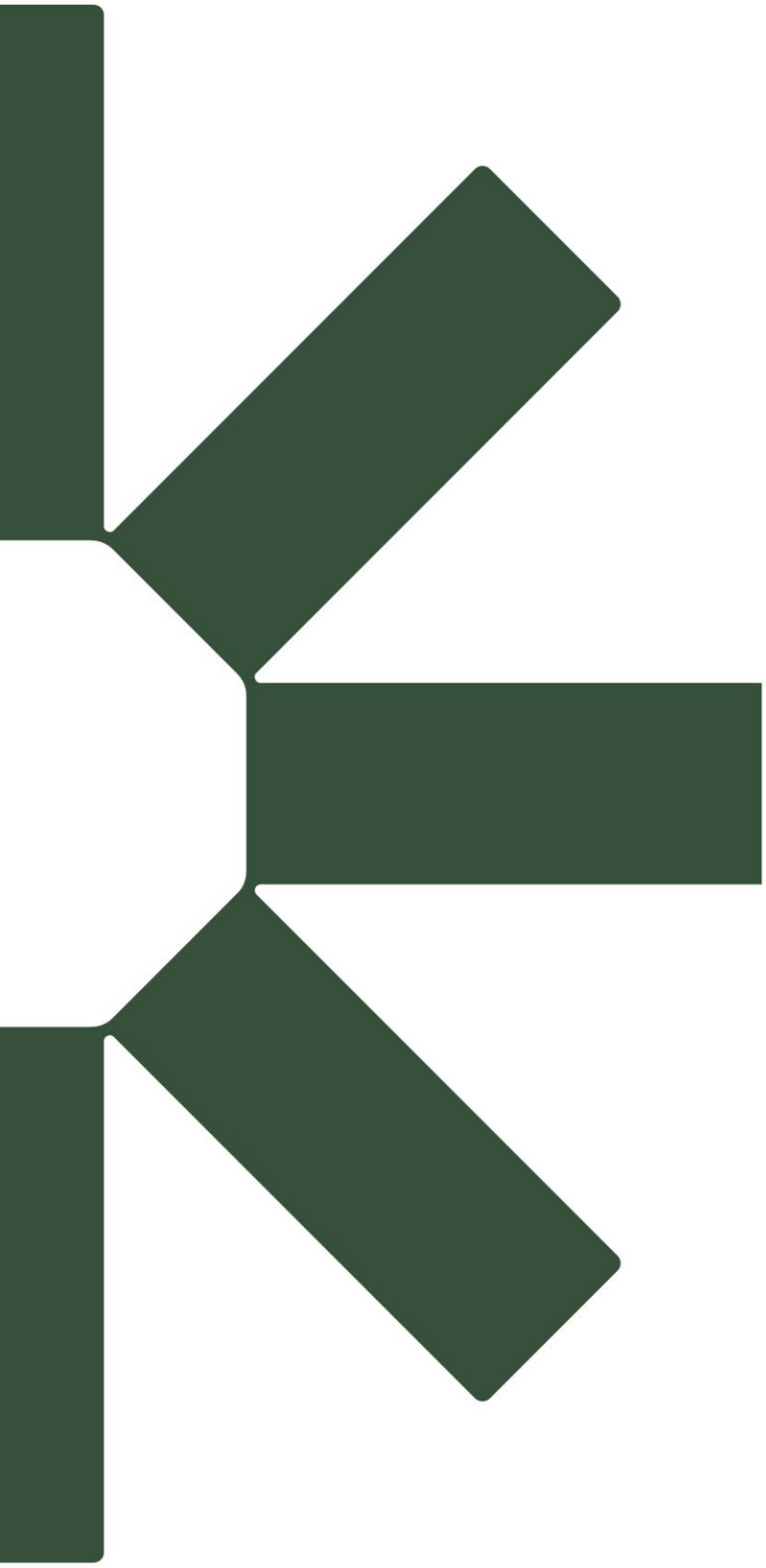


a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

Examples of above ground stabilising systems



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