Appendix 16

Derrylea Road Arborist Report

Arboricultural Report

BS5837:2012 Trees in Relation to Design, Demolition and Construction - Recommendations

Proposed Site: Derrylea,
Co Kildare

Client: Dara Energy Limited

Project: Derrynadarragh Wind Farm
Underground Cabling

Arbtech
Ireland

Contents

Appendices

1.0 Project Brief and Objectives

1.1 Arbtech Ireland was retained by Dara Energy Limited to undertake a pre-development tree survey at Derrylea, Co Kildare in relation to undergrounding of cables from Derrynadarragh Wind Farm in accordance with British Standards 'Trees in relation to design, demolition & construction – Recommendations (BS 5837:2012). The surveyed trees are located within and adjacent to the boundaries of the proposed development.

1.2 The objective of this survey was to gather information regarding the location of trees, tree groups and hedgerows and how these may be impacted by trenching works.

1.3 The survey report will detail any constraints posed by existing trees to the proposed development.

1.4 An arboricultural impact assessment addresses the likely impact of the proposed development on trees within the site. Recommendations for the protection of trees and hedgerows during construction work is based on BS 5837: 2012. Any recommendations for tree work are based on BS 3998: 2010.

2.0 Survey Methodology

2.1 A tree survey and visual assessment was undertaken on 28th August 2025 by Rik Pannett and Therese Woodruff. The trees were surveyed during daylight hours in changeable weather conditions.

2.2 Tree inspections were undertaken from ground level using Visual Tree Assessment (VTA) techniques.

2.3 All trees, groups of trees and hedgerows surveyed have been allocated a number prefixed by the letter T, G or H. In accordance with BS 5837: 2012, only trees with a stem diameter of 75mm or greater were surveyed. As per section 4.4.2.3, trees forming obvious groups were assessed as such.

2.4 Tree species, estimated maximum height, stem diameter and crown spread were recorded for significant trees, groups, and hedgerows within and adjacent to the site.

2.5 The findings of the survey are given in tabular form in the Tree Survey Data (appendix A). An explanation of the survey headings is provided (appendix B).

2.6 All trees were assessed using the 'Cascade chart for tree quality assessment' as described in table 1 of BS 5837:2012 (appendix C).

2.7 The locations of trees and hedgerows are illustrated on the Tree Constraints Plan (TCP: appendix D).

2.8 Tree protection measures are illustrated on the Tree Protection Plan (TPP: appendix E).

2.9 An arboricultural method statement is included to provide guidance in relation to tree protection during the construction phase of the development (appendix F).

2.10 Drawings referenced in preparation of this report are shown below in table 1.

Grid Connection to Bracklone pdf.	Dara Energy Ltd.

***Table 1**: Referenced drawings.*

3.0 Limitations of Survey Report

3.1 Trees and hedgerows have been inspected from ground level only. No climbing inspections have been undertaken. Should a more detailed inspection be deemed appropriate, this will be covered within recommendations in appendix A. Trees are dynamic living organisms, whose health and condition can be subject to rapid change, depending upon external and internal factors. This survey does not constitute a tree risk assessment, and the conclusions and recommendations herein are valid for one year.

3.2 Where obvious features and defects were observed they have been noted in appendix A. Where fruiting bodies of tree decay fungi are present, they have been noted, however, annual fruiting bodies are not present year-round, and as such, the absence of them does not necessarily indicate the absence of active fungi within the tree crown, stem, or root system.

3.3 No assessment of the soil has taken place as part of this report. BS 5837:2012 states that a soil assessment should be carried out by a competent person to establish the structure, clay content and potential volume for change of the soil. A survey of this nature is considered outside the scope of this arboricultural assessment. For guidance on soil structure in relation to construction, advice should be sought from a Structural Engineer.

4.0 Site Overview

4.1 The survey focuses on trees and hedgerows located within the red line as illustrated below (fig. 1).

Figure 1: *Redline boundary illustrating survey area (Google aerial maps).*

4.2 The proposed development consists of the excavation of the road to facilitate the installation of underground ducting for electricity cables to facilitate grid connection to Bracklone as illustrated below (fig. 2).

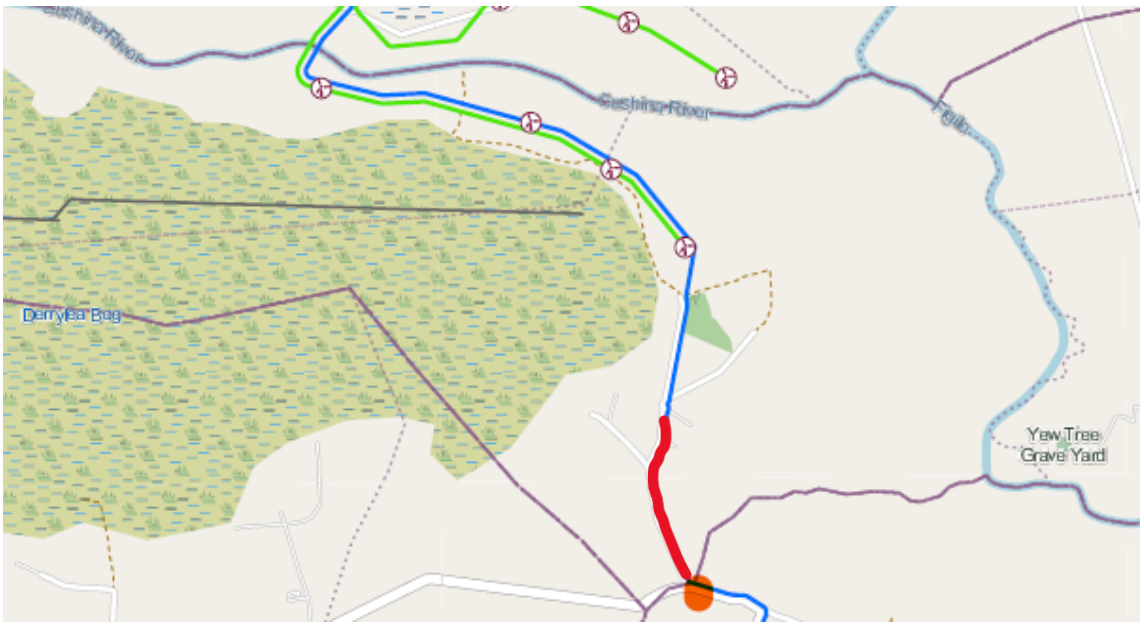


Figure 2: *Redline illustrating proposed underground cabling.*

4.3 The road is flanked by hedgerows H001 (fig. 3) and H002 (fig. 4) at the southern extent for approximately 30 metres. A single mature ash T2008 is situated within H001.

Figure 3: *H001 Hedgerow at southern extent.*

Figure 4: *H002 Hedgerow at southern extent.*

4.4 An avenue of mature trees (fig. 5), horse chestnut and lime, extend northwards for approximately 300 metres, forming a green tunnel. Species rich hedgerows flank the road for a further 150 metres, with mature ash, wych elm, lime and sycamore forming the treeline.

Figure 5: *G001 & G004 Avenue of mature trees.*

4.5 The majority of the trees are in fair condition, although there is a dead mature horse chestnut within the avenue in G001, a dead ash within G002 (fig. 6) and a dead elm within G003. Some of the ash are infected with ash dieback disease – *Hymenoscy*phus *fraxineus,* and a number of elm are succumbing to Dutch elm disease – *Ophiostoma novo-ulmi*). The horse chestnut are infested with leaf miner- *Cameraria ohridella*.

Figure 6: *G002 Dead ash within group.*

5.0 Summary of Findings

5.1 2 individual trees, a further 84 trees contained within 4 groups and 3 hedgerows have been surveyed. A breakdown of the numbers of trees, groups, and hedgerows in each retention category is shown in table 2 below as per BS 5837:2012:

	Category A	Category B	Category C	Category U
Individual Trees	0	1	0	1
Trees in Groups	0	84	0	0
Hedgerows	0	0	3	0
Total	0	85	3	1

***Table 2**: Tree Categorisation.*

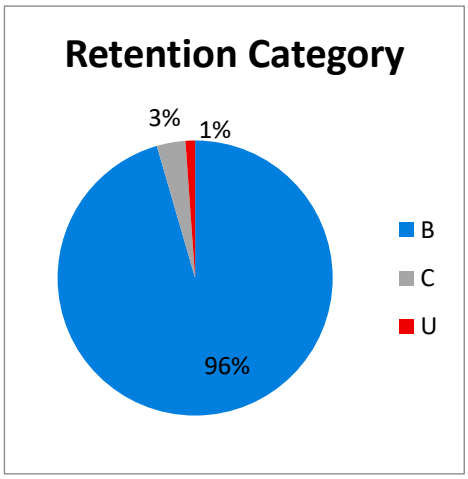
5.2 Category A trees are of high quality and there should be a general presumption for retention of these trees.

5.3 Category B trees are of moderate quality. It is likely that most Category B trees should be retained and regarded as a constraint to development. Some Category B trees, particularly smaller individuals are of insufficient value to impose significant design constraints and removal of such trees can be justified to promote good design (usually on the basis that mitigation is provided elsewhere on the site in the form of high-quality new planting).

5.4 Category C trees are of low quality. They should not impose significant constraints to design layout and can defensibly be removed to facilitate good design. If Category C trees can be satisfactorily retained within the proposed layout, then consideration should be given for this.

5.5 Category U trees are unsuitable for retention, usually in such a condition that they cannot realistically be retained as living trees and should be removed for reasons of sound arboricultural practice.

5.6 Tree quality categorisation (chart 1) and life stage of trees (chart 2) are displayed below.



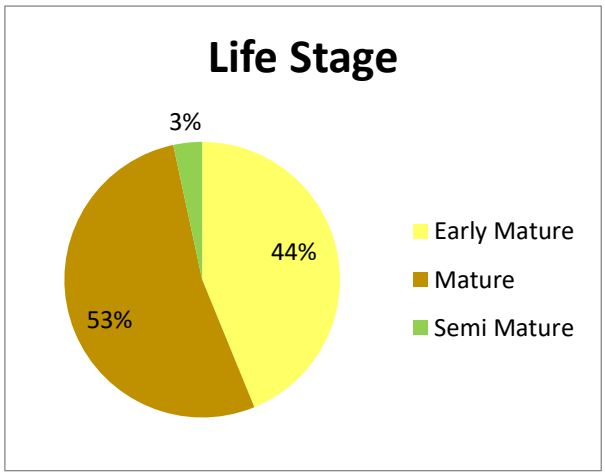


***Chart 1**: Retention category.*

***Chart 2**: Life stage.*

5.7 Lists of the tree species surveyed with their common and botanical names (tables 3 and 4) are displayed below.

Common Name	No. trees
Broad-leaved lime	11
Common ash	28
Common beech	1
Common hawthorn	9
Dogrose	2
Grey willow	1
Guelder rose	1
Hazel	2
Horse chestnut	22
Lime	14
Privet	1
Spindle	1
Sycamore	1
Wych elm	6

Botanical Name	No. trees
Acer pseudoplatanus	1
Aesculus hippocastanum	22
Corylus avellana	2
Crataegus monogyna	9
Euonymus europaeus	1
Fagus sylvatica	1
Fraxinus excelsior	28
Ligustrum vulgare	1
Rosa canina	2
Salix cinerea	1
Tilia platyphyllos	11
Tilia sp.	14
Ulmus glabra	6
Viburnum opulus	1

***Tables 3 and 4**: Tree species surveyed.*

6.0 Arboricultural Impact Assessment

6.1 Based on the proposed site layout drawings supplied, the arboricultural impact of the proposed development was assessed as follows.

6.2 The trees G001 (fig. 5) and G004 (fig. 6) forming the avenue lining the road are mature, possibly 150 years old. The nominal RPAs of these trees extend into the road; however, tarmac roads and their subbases generally prove an obstacle to root extension due to the compacted and hypoxic conditions present. Due to the age of the trees, it is possible that root extension took place before the existing road surface was laid down, and there may be structural roots, live and dead, extending beneath the carriageway.

Figure 5: *G001 Mixed species mature group.*

Figure 6: *G004 Mature trees forming part of avenue.*

6.3 The remainder of the tree groups G002 (fig. 7) and G003 (fig. 8) adjacent the road are far younger and have probably grown there since the road surface has been in place, therefore, it is unlikely that tree roots have extended beneath the road surface.

Figure 7: *G002 Roadside trees displaying good vigour.*

Figure 8: *G003 Mixed species roadside group.*

6.4 Four dead and dying trees are within the survey area. These consist of a horse chestnut in G001 (fig. 9), an ash in G002, a dead elm stem in G003, and the ash T2009 (fig. 10).

Figure 9: *G001 Dead horse chestnut.*

Figure 10: *T2009 Dying ash tree.*

6.5 The species rich hedgerow H003 at the northern extent will not be impacted by proposed works.

Figure 8: *H003 Species rich roadside hedgerow.*

6.6 Tree Constraints Plan

The Tree Constraints Plan (TCP: appendix D) has been produced as a basis for the assessment of the constraints imposed by existing trees and hedgerows on the proposed design. Refer to TCP for location of trees, groups of trees and hedgerows surveyed.

6.7 Tree Protection Plan

The Tree Protection Plan (TPP: appendix E) shows the indicative position of the root protection area (RPA) for trees, groups of trees and hedgerows with a retention priority. The RPA (as described in BS5837: 2012 sec. 3.7) represents the minimum area around each tree in which the ground should remain largely undisturbed and is shown as a pink line on the TPP (refer to Tree Survey Data: appendix A for accurate RPA radiuses). Tree and hedgerow protection is shown as an orange line on the TPP.

6.8 Summary of Impact of Proposed Development on Tree Population

Surveyed Trees	Category A	Category B	Category C	Category U	Total no.	%
Trees proposed for retention.	0	82	0	0	82	95.3
Trees proposed for monolithing/removal for reasons of safety.	0	3	0	1	4	4.7
Hedgerows proposed for retention.	0	0	3	0	3	100
Hedgerows proposed for removal.	0	0	0	0	0	0

***Table 5**: Summary of Impact on Tree Population*

6.9 In conclusion, the current development proposals will cause minimal impact upon the tree population providing the recommendations contained in the method statement are adhered to.

6.10 Retained trees close to construction activities must be protected using barriers as specified in the method statement (appendix F). Where construction is to take place within the RPAs of retained trees, methods which prevent or limit damage to roots must be utilised.

6.11 The RPAs as illustrated are indicative only, and roots may not have grown to the extents indicated in the plan.

6.12 Construction activity can negatively impact trees, causing temporary and lasting damage unless measures are taken to ensure the rooting systems, stems, and crowns of trees are sufficiently protected during construction works.

6.13 Compaction caused by construction traffic and root severance during excavation can cause damage and death to affected sections of the root system, negatively impacting living processes, potentially destabilising the tree, and creating conditions favourable to the ingress of wood decay fungi.

6.14 Bark damage to the stems of trees during construction can cause necrosis of the underlying tissue and create conditions favourable to the ingress of wood decay fungi.

6.15 Mechanical damage to the crowns of trees during construction causes the loss of photosynthetic material, and damages woody material, creating conditions favourable to wood decay fungi.

7.0 Statutory Obligations

7.1 I am currently unaware if any trees at the site are protected by a Tree Preservation Order (TPO) or by virtue of being located within a Special Area of Conservation. I have not been instructed to establish the TPO status of trees with the Local Planning Authority. If any trees are subject to TPOs then consent should be sought from the relevant Local Authority prior to commencement of any works.

8.0 Statement of Authority

Prepared by: Rik Pannett

Position: Consultant Arborist

Work Description: Surveyor/Author

Qualifications: Dip. Arboriculture (ABC Awards); Professional Tree Inspection (Lantra); Tech Cert Arboriculture (City & Guilds)

Member of Arboricultural Association UK

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Arboricultural ASSOCIATION
Technician Member

9.0 Bibliography

BS 5837 (2012). *Trees in Relation to Design, Demolition and Construction -Recommendations.* British Standards Institution. TSO, London.

BS 3998 (2010) *Tree Work - Recommendations*. British Standards Institution. TSO, London.

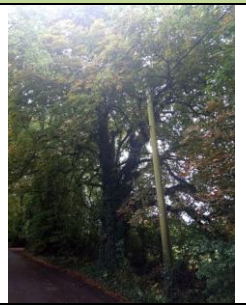
NJUG 4 (2007) *Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees* (Issue 2). National Joint Utilities Group.

Tree Survey Data

Derrynadarragh Wind Farm

Underground Cabling

Appendix A

Ref.	Species	Full Structure	Measurements	Survey Notes	Retention Category	RPA	Tree Value	Recommendations	Photo
G001	Horse chestnut x12 *(Aesculus hippocastanum)* Common beech *(Fagus sylvatica)* Broad-leaved lime x11 *(Tilia platyphyllos)*	Group 24 trees	Height (m): 20 24 stems, avg.(mm): 900# Spread (m): 5N, 5E, 5S, 5W Crown Clearance (m): 4 Lowest Branch (m): 3(N) Life Stage: Mature Rem. Contrib.: 30+ Years	Row of mature roadside trees forming part of avenue. Generally good condition, with good unions and crown density. One horse chestnut tree is dead. Pests and Diseases: Horse Chestnut Leaf Miner (Cameraria ohridella)	B2	Area: 3261 sq m.	Physiological Condition: Fair Structural Condition: Fair Public Amenity Value: Good Inspection Limitations: None Bat Habitat: Medium	Pre construction: Reduce dead stem to 3 metre monolith. During construction: Protect trees with protective barriers - as shown on plans. Manual Excavation for root protection. Post construction: No action required.	
G002	Common ash x19 *(Fraxinus excelsior)* Sycamore *(Acer pseudoplatanus)* Lime x2 *(Tilia sp.)*	Group 22 trees	Height (m): 17 22 stems, avg.(mm): 450# Spread (m): 3N, 3E, 3S, 3W Crown Clearance (m): 3 Lowest Branch (m): 2(W) Life Stage: Early Mature Rem. Contrib.: 20+ Years	Roadside row of trees. 1 dead ash stem. Generally good vigour. Pests and Diseases: Ash Health Class 2 - 75%-50% remaining canopy	B2	Area: 1360 sq m.	Physiological Condition: Fair Structural Condition: Fair Public Amenity Value: Moderate Inspection Limitations: Vines Bat Habitat: Low	Pre construction: Reduce dead stem to 3 metre monolith. During construction: Protect trees with protective barriers - as shown on plans. Post construction: No action required.	
G003	Wych elm x5 *(Ulmus glabra)* Common ash x5 *(Fraxinus excelsior)* Common hawthorn x6 *(Crataegus monogyna)*	Group 16 trees	Height (m): 17 16 stems, avg.(mm): 500# Spread (m): 4N, 4E, 4S, 4W Crown Clearance (m): 3 Lowest Branch (m): 3(W) Life Stage: Early Mature Rem. Contrib.: 20+ Years	Roadside mixed species row with 1 dead elm stem. Otherwise good vigour, unions, and crown density. Pests and Diseases: Ash Health Class 1 - 100%-75% remaining canopy	B2	Area: 695 sq m.	Physiological Condition: Fair Structural Condition: Fair Public Amenity Value: Moderate Inspection Limitations: Vines Bat Habitat: Low	Pre construction: Remove dead stem. During construction: Protect trees with protective barriers - as shown on plans. Post construction: No action required.	
G004	Lime x12 *(Tilia sp.)* Horse chestnut x10 *(Aesculus hippocastanum)*	Group 22 trees	Height (m): 20 22 stems, avg.(mm): 1000# Spread (m): 4N, 4E, 4S, 4W Crown Clearance (m): 1 Lowest Branch (m): 1(N) Life Stage: Mature Rem. Contrib.: 30+ Years	Row of roadside trees forming part of avenue. Generally good condition. Pests and Diseases: Horse Chestnut Leaf Miner (Cameraria ohridella)	B2	Area: 3047 sq m.	Physiological Condition: Fair Structural Condition: Fair Public Amenity Value: Good Inspection Limitations: None Bat Habitat: Low	Pre construction: No action required. During construction: Protect trees with protective barriers - as shown on plans. Manual Excavation for root protection. Post construction: No action required.	

Ref.	Species	Full Structure	Measurements	Survey Notes	Retention Category	RPA	Tree Value	Recommendations	Photo
H001	Hazel *(Corylus avellana)* Common hawthorn *(Crataegus monogyna)*	Hedge	Height (m): 8 Stem Diam(mm): 150# Spread (m): 2N, 2E, 2S, 2W Life Stage: Semi Mature Rem. Contrib.: 10+ Years	Roadside lapsed hedgerow.	C2	Radius: 1.8m. Area: 136 sq m.	Physiological Condition: Fair Structural Condition: Fair Public Amenity Value: Low Inspection Limitations: None Bat Habitat: Low	Pre construction: No action required. During construction: Protect trees with protective barriers - as shown on plans. Post construction: No action required.	
H002	Common ash *(Fraxinus excelsior)* Common hawthorn *(Crataegus monogyna)* Hazel *(Corylus avellana)* Dogrose *(Rosa canina)*	Hedge	Height (m): 3 Stem Diam(mm): 100 Spread (m): 1N, 1E, 1S, 1W Life Stage: Semi Mature Rem. Contrib.: 10+ Years	Managed roadside hedgerow.	C2	Radius: 1.2m. Area: 81 sq m.	Physiological Condition: Fair Structural Condition: Fair Public Amenity Value: Low Inspection Limitations: None Bat Habitat: Low	Pre construction: No action required. During construction: Protect trees with protective barriers - as shown on plans. Post construction: No action required.	
H003	Common ash *(Fraxinus excelsior)* Spindle *(Euonymus europaeus)* Common hawthorn *(Crataegus monogyna)* Wych elm *(Ulmus glabra)* Guelder rose *(Viburnum opulus)* Privet *(Ligustrum vulgare)* Grey willow *(Salix cinerea)* Dogrose *(Rosa canina)*	Hedge	Height (m): 3 Spread (m): 1N, 1E, 1S, 1W Life Stage: Semi Mature Rem. Contrib.: 10+ Years	Species rich roadside hedgerow.	C2	Area: 563 sq m.	Physiological Condition: Good Structural Condition: Good Public Amenity Value: Low Inspection Limitations: None Bat Habitat: Low	Pre construction: No action required. During construction: Protect trees with protective barriers - as shown on plans. Post construction: No action required.	
T2008	Common ash *(Fraxinus excelsior)*	Tree	Height (m): 14 Stem Diam(mm): 600# Spread (m): 4N, 4E, 4S, 5W Crown Clearance (m): 4 Lowest Branch (m): 4(E) Life Stage: Early Mature Rem. Contrib.: 20+ Years	Hedgerow tree with good unions and crown density.	B2	Radius: 7.2m. Area: 163 sq m.	Physiological Condition: Good Structural Condition: Good Public Amenity Value: Moderate Inspection Limitations: Vines Bat Habitat: Low	Pre construction: No action required. During construction: Protect trees with protective barriers - as shown on plans. Post construction: No action required.	
T2009	Common ash *(Fraxinus excelsior)*	Tree	Height (m): 16 Stem Diam(mm): 550# Spread (m): 4N, 4E, 4S, 4W Crown Clearance (m): 5 Lowest Branch (m): 5(E) Life Stage: Mature Rem. Contrib.: <10 years	Ivy obscuring stem and main unions. Extensive dieback throughout crown. Pests and Diseases: Ash Health Class 4 - 25%-0% remaining canopy	U	Radius: 6.6m. Area: 137 sq m.	Physiological Condition: Diseased Structural Condition: Collapsing Public Amenity Value: Moderate Inspection Limitations: Vines Bat Habitat: Low	Pre construction: Reduce to 3 metre monolith. During construction: Protect trees with protective barriers - as shown on plans. Post construction: No action required.	

Key to Tree Survey Data

Ref.	Species	Full Structure	Measurements	Survey Notes	Retention Category	RPA	Tree Features	Recommendations	Photo

Ref. Reference number identifies the tree, tree group or hedge & corresponds with the plans e.g. T0301, H2.

Species The common and botanical names are given for each tree.

Full Structure Structure recorded e.g., tree, tree group, hedge, coppice, pollard, woodland and quantity within a group.

Measurements: Height Estimated in metres.

Stem Diameter Measured at approximately 1.5 meters above ground level, recorded in millimetres.

Number of Stems Recorded from ground level or base of tree.

Crown Spread Estimated in metres and given at cardinal compass points.

Life Stage Refers to the age of the tree or tree structure & recorded as e.g.:

Y = Young; SM = Semi-mature; EM = Early Mature; M = Mature; V = Veteran; D = Dead.

Estimated Remaining Contribution <10 years; 10+; 20+; 30+; 40+

Survey Notes Observations regarding tree condition, location, history, structure & vigour.

Retention Category Each tree or tree structure is categorised as either **A**; **B**; **C**; **U** & sub-categories:

1 = Arboricultural qualities; 2 = Landscape qualities; 3 = Cultural values (see Appendix C for further information).

RPA Root protection radius (r) measured in metres from centre of tree (r= 12 x stem diameter at 1.5m).

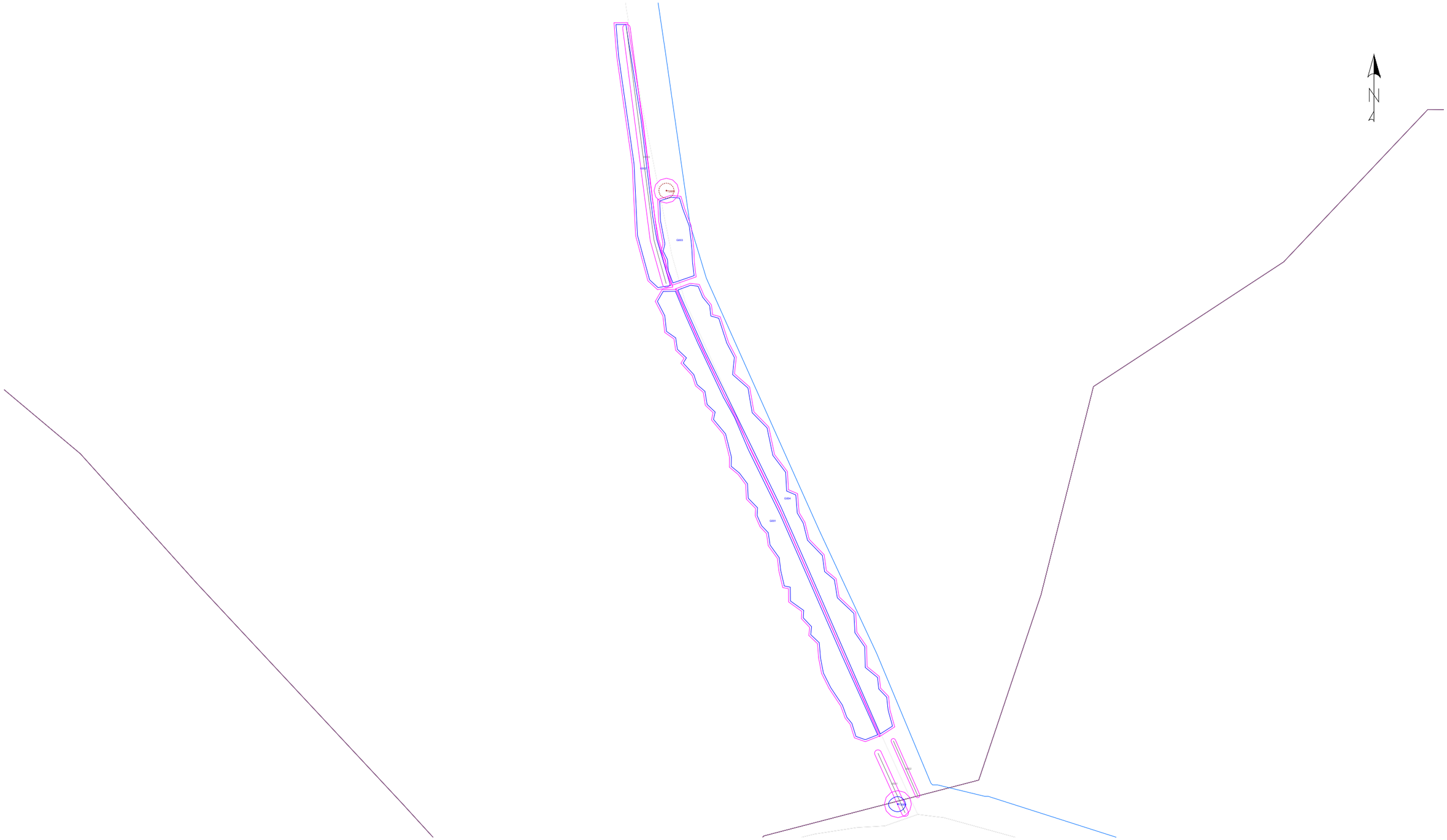
Tree Features Categorises physiological and structural condition; Amenity value; Bat habitat

Photo Image of each tree, group or hedgerow.

Recommendations Management recommendations for trees within the development.

TREES UNSUITABLE FOR RETENTION		
Category and Definition	**Criteria**	**Identification on Plan**
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 (eg, 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.*	

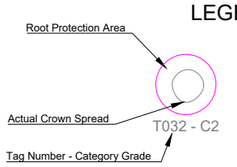
TREES TO BE CONSIDERED FOR RETENTION				
Category and Definition	**Criteria**			**Identification on Plan**
	1. Mainly arboricultural qualities	2. Mainly landscape qualities	3. Mainly cultural values, including conservation	
Category A Trees of high quality with an estimated remaining life expectancy 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 (eg, 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, veteran trees or wood-pasture).	
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 (eg, 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.	
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 150mm.	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.	



CONTRACTOR:

Rik Pannett : Consultant Arborist
Retained by Dara Energy

LEGEND

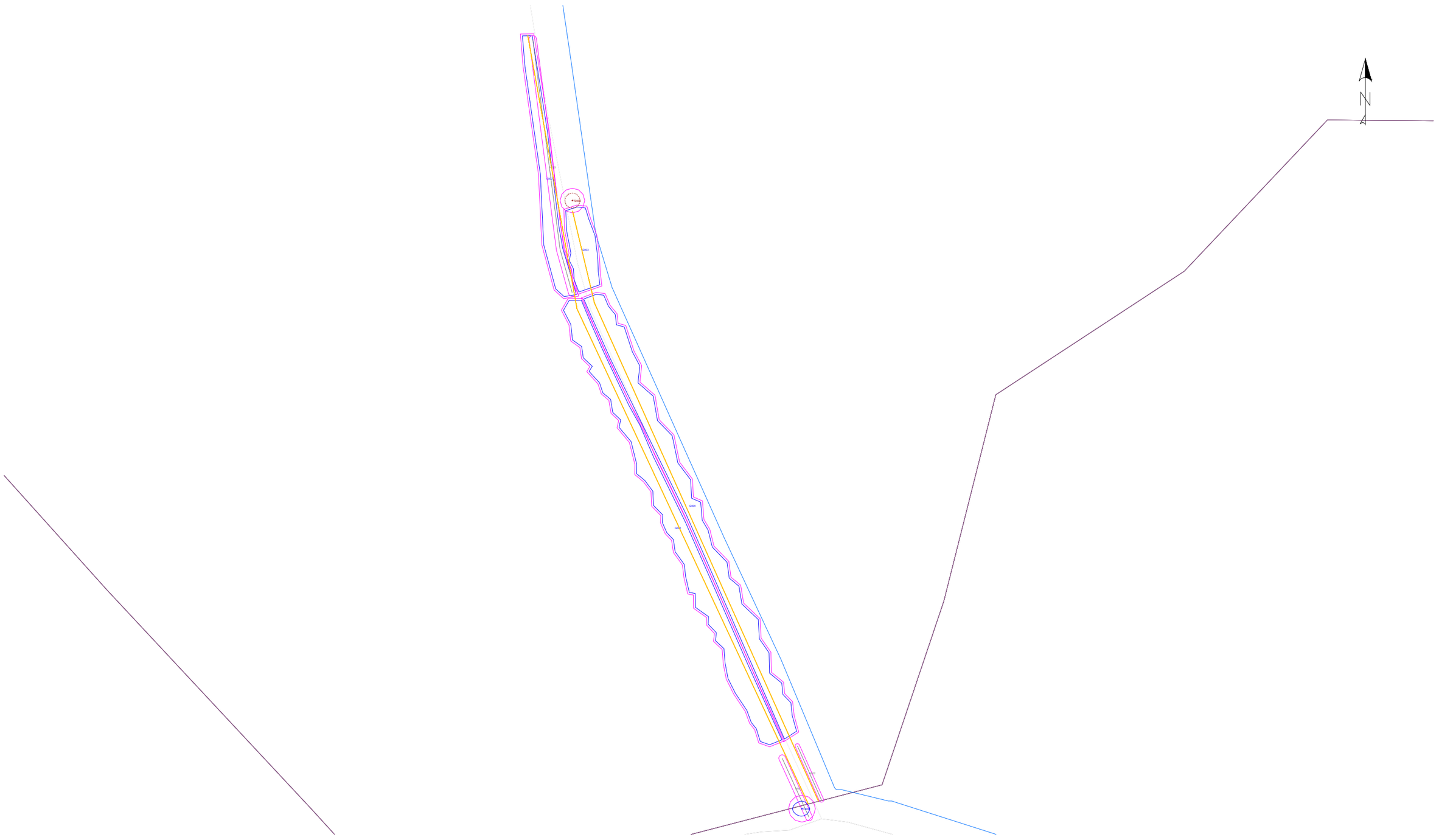


CATEGORY GRADE
CATEGORY U
CATEGORY A
CATEGORY B
CATEGORY C

DRAWING No	RP-2025-010-1-TCP	STATUS	DRAWN BY	DATE	SCALE	ENG CHECK	DATE
			WD	05/09/25	1:2000	RP	05/09/25

REV SUFFIX	REVISION DETAILS	DATE

PROJECT	DERRYNADARRAGH	SHEET SIZE
DRAWING TITLE	TREE CONSTRAINTS PLAN	A3



CONTRACTOR:

Rik Pannett : Consultant Arborist
Retained by Dara Energy

REMOVAL AREA

LEGEND

Root Protection Area

Actual Crown Spread

T032 - C2

Tag Number - Category Grade

CATEGORY GRADE

CATEGORY U

CATEGORY A

CATEGORY B

CATEGORY C

TREE PROTECTION

DRAWING No	RP-2025-010-1-TPP	STATUS
REV SUFFIX	REVISION DETAILS	DATE

DRAWN BY	DATE	SCALE	ENG CHECK	DATE
WD	05/09/25	1:2000	RP	05/09/25

PROJECT	DERRYNADARRAGH	SHEET SIZE
DRAWING TITLE	TREE PROTECTION PLAN	A3

Appendix F

Derrynadarragh Wind Farm – Underground Cabling

Arboricultural Method Statement

Method Statement Summary

The arboricultural method statement provides information about how to protect trees, their crowns, stems, and root systems during the construction process. The stages described below must be used as reference by the main contractor to prepare a site-specific method statement for the construction works. The method statement is to be used in conjunction with the Tree Survey Data (appendix A) and the Tree Protection Plan (TPP: appendix E) which detail the indicative extent of root protection areas (shown as pink line). The TPP must be made available to all contractors as a colour print only.

Stage 1: Pre-construction stage

1.0 The developer must appoint an arboriculturist who will oversee tree protection measures for the duration of the project. The arboriculturist will make regular site visits to ensure continued compliance, as well as to respond to project specific issues as they arise.

1.1 Tree work
The developer will appoint a qualified arborist to undertake pruning and felling works as specified in the tree survey recommendations (appendix A). All works carried out must conform to BS3998: 2010 Tree Work. Recommendations. Any damage caused to a tree during the construction phase must be reported immediately to the site manager so that inspection and/or remedial works can be undertaken.

1.2 Protective fencing
On completion of any tree works, protective fencing (fig. 1) must be erected at the edge of the RPA, at each phase of works, in accordance with BS5837:2012. Trees remote from construction works may be protected using a lower specification fencing such as Euromesh (fig. 2), or no fencing at all if deemed appropriate by the project arboriculturist. Fencing is intended as a precaution to prevent accidental damage to the rooting area of retained trees. The positioning of any fencing at the edge of the RPA is shown in the TPP as an orange line.

- Erection of protective fencing must be completed before any materials or construction machinery are brought onto site and before any construction works commence.
- Signage (fig. 3) indicating ‘tree protection area, no construction access’ or similar must be affixed to the protective fencing.
- Fencing is not to be removed or repositioned without the approval of the project arboriculturist

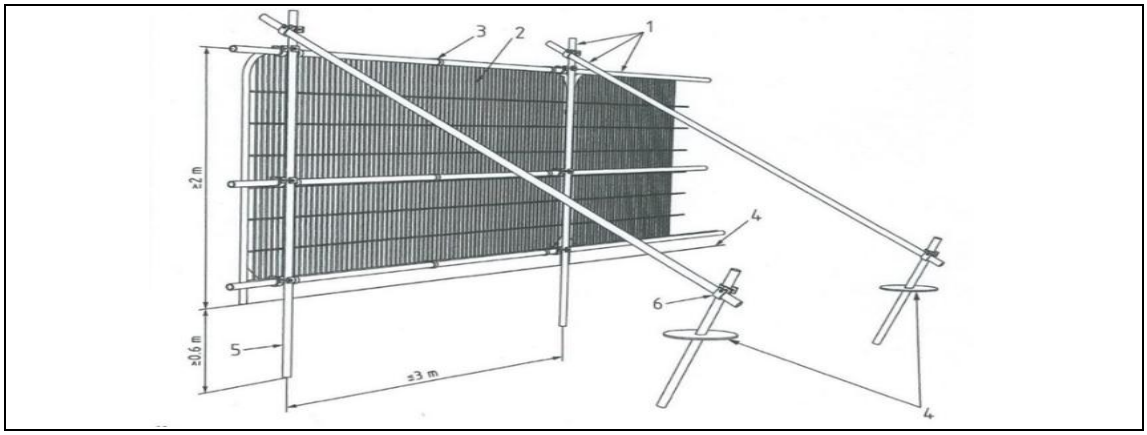


***Figure 1**: Protective barrier specifications.*

***Figure 2**: Euromesh.*

***Figure 3**: Signage to be affixed to barrier.*

1.3 Ground protection for construction access routes

Where construction or temporary construction access is considered necessary within the RPA, the alignment of the protective barrier may be set back, under supervision of the project arboriculturist.

Temporary ground protection within the RPA must be capable of supporting the load of any persons or traffic using the site without affecting or compacting the underlying soil.
The ground protection must comprise one of the following or similar, as described in BS5837:2012:

- For pedestrian movement, single thickness scaffold board shall be laid on top of 100mm of woodchip laid on top of a geotextile membrane.
- For plant up to gross weight of 2t, interlinked boards must be laid over a compression resistant layer such as woodchip to 150mm, over a geotextile membrane.
- For construction traffic over 2t gross weight a proprietary system or pre-cast concrete slabs must be installed, in conjunction with arboricultural advice.

In all instances, the objective is to prevent soil compaction where possible, which can occur from the passage of a single vehicle, especially in wet conditions

1.4 Installation of underground Services

Installation of underground cabling must comply with the National Joint Utilities Group (NJUG) 'Guidelines for the planning, installation, and maintenance of utility services in proximity to trees' and with BS 5837:2012. The excavation of open trenches by machine is unacceptable within the RPA of any of the retained trees, and wherever possible, services will be routed outside of any retained trees RPA. Where this is not possible cables must be routed together in a common duct and any inspection chambers sited outside the RPA.

Acceptable techniques for the laying of services are:

- Trenchless - by use of thrust boring or similar techniques. The pit excavations for starting and receiving the machinery must be located outside of the RPA. To avoid root damage, the mole must run at a depth of at least 600mm. Use of external lubricants on the mole other than water should be avoided.
- Broken trench - by using hand dug trench sections together with trenchless techniques. It must be limited to practical access and installation around or below the roots. The trench must be dug by hand and only be long enough to allow access for linking to the next section. The open sections must be kept as short as possible.
- Continuous trench - the trench is excavated by hand and retains as many roots as possible. The surface layer is removed carefully and hand digging of the trench takes place. No roots over 2.5cm diameter or clumps of smaller roots (including fibrous) shall be severed. The bark surrounding the roots must be maintained. Cutting of roots over 2.5cm diameter must be performed under supervision of the project arboriculturist. If roots must be cut, a sharp tool (defined as spade, narrow spade, fork, breaker bar, secateurs, handsaw, hand trowel) will be used.
- Roots, and in particular fine roots, are vulnerable to desiccation on exposure to air. The roots are at greatest risk when there are rapid fluctuations in the air temperature around them. It is vitally important that the roots are covered with sacking whilst the trench is open.

1.5 Pre-commencement site meeting

Prior to commencement of construction works, a pre-commencement site meeting and contractor briefing will occur. Tree protection barriers are to be inspected by the project arboriculturist, and any additional protection measures to be agreed. Scope of future inspections and monitoring to be agreed between the site manager and project arboriculturist.

1.6 Landscape works

Any new planting of trees and hedgerows shall be undertaken in accordance with BS5837:2012 and supervised by the project arboriculturist or landscape architect. The existing ground levels within the RPA must be retained and not subjected to compaction or alteration. Manual tools should be used where possible for planting within RPAs to minimise root disturbance and damage.

Stage 2: Construction Works stage

2.0 Protective fencing
During the construction phase, protective fencing must be kept in place, remain upright and rigid as intended, and checked daily for any damage. The fencing must remain in place and not be removed until all site works are completed.

2.1 Excavations
Excavation works can commence once the protective fence line is in place. In advance of excavation, the project manager, site foreman and project arboriculturist will identify and determine the extent of the impact of the proposed works and identify any additional mitigation measures to protect retained trees and hedgerows.

The project arboriculturist will supervise the pruning of roots which are exposed and damaged during excavation works. The excavated face is to be covered with soil to prevent drying out and death of further root material.

2.2 Working within RPAs
If any works are to take place within the RPA, the project arboriculturist must be informed so that mitigation measures are agreed upon to limit impact on root, stem, and crown of tree.

2.3 Site considerations
Throughout the development stages the following must be observed:

- No materials, chemicals, machinery, or vehicles are to be stored within the RPA.
- No materials are to be rested against the trunk of trees.
- Burning of rubbish is not permitted within 10m of RPA or hedgerows. Wind direction must be factored when locating a fire, and it must not be unattended.
- Attaching items to any part of a tree is not permitted.
- Washing of machinery, concrete, diesel fuel or other contaminants are not to be discharged within 10m of RPA or hedgerows.
- Any damage caused to protective fencing, ground protection, or retained trees must be reported to the site manager without delay.
- The area around trees enclosed by protective fencing must be considered a construction exclusion zone.

Stage 3: Post Construction Works stage

3.0 On completion of construction works, retained trees are to be re-examined by the project arborist to identify any additional remedial works required to ensure tree health and site safety.